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# 1983 APPLE II<sup>+</sup> III SOFTWARE DIRECTORY



COMPUTERIZE  
MY MEDICAL  
BILLING?

HELP MY  
LEGAL  
PRACTICE?

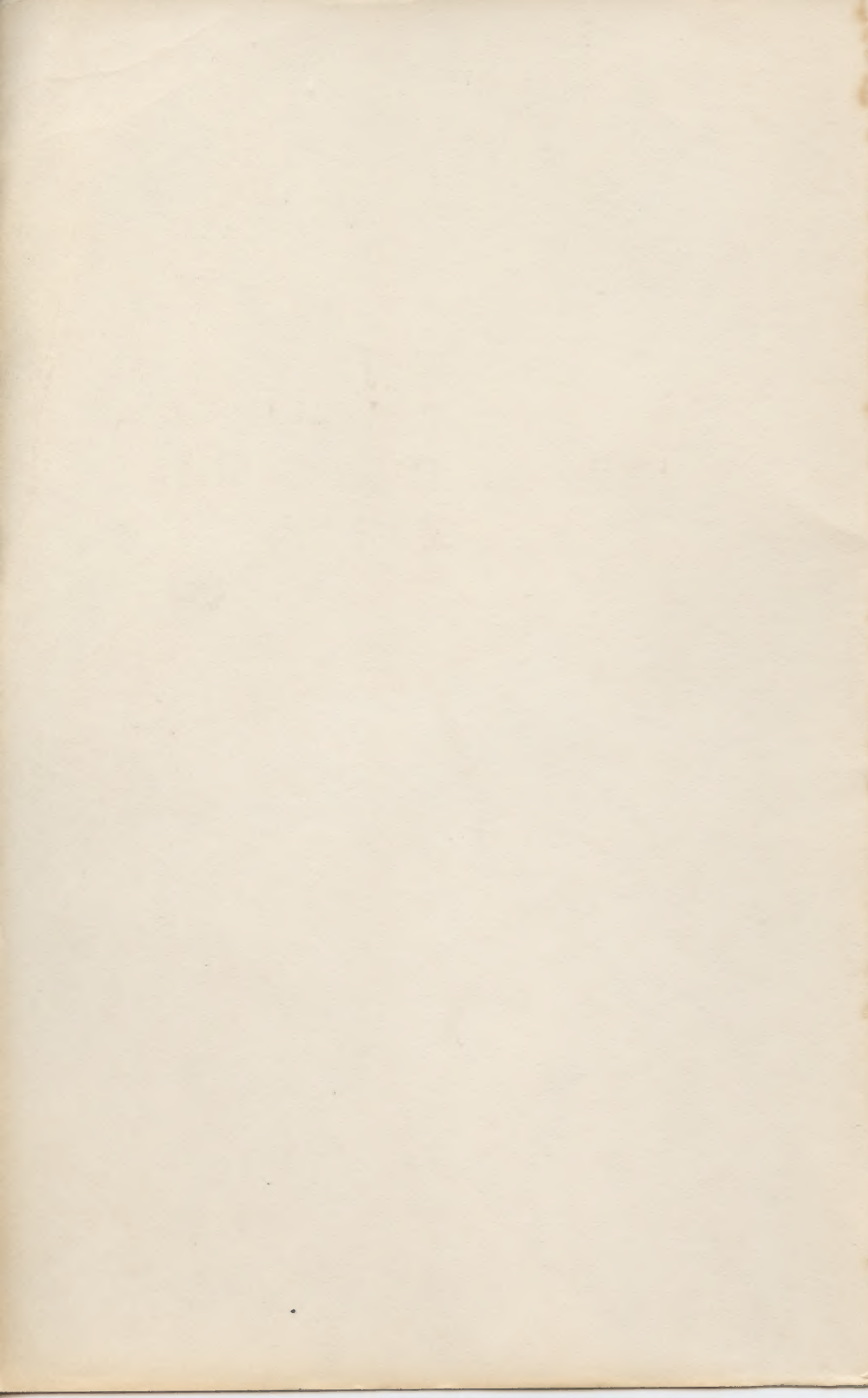
BUSINESS  
ACCOUNTING  
PROGRAM?

YES, YES!  
AND MUCH  
MORE!

ENGINEERING  
PROGRAMS  
TO CALCULATE  
ROOTS  
EQUATIONS?

WOW

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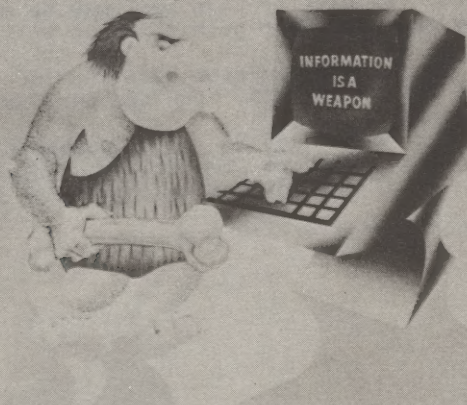


**1983**  
**APPLE II/III**  
**SOFTWARE DIRECTORY**  
**VOL II**

1983  
APPLE II/III  
SOFTWARE DIRECTORY  
VOL II



# VAN LOVES THEORY



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7899 Mastin Dr.

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Compiling a Software Directory of the magnitude of VanLoves 1983 Apple II/III Software Directory is a time consuming, ambitious task. We at Advanced Software Technology, Inc. are proud to offer you, the Apple Computer user, this comprehensive information source to aid you in locating the latest software, peripherals and other items of special interest for your Apple computer.

We have watched Apple computer grow to become the most respected name in microcomputers. We hope this directory finds a permanent place on your book shelf right next to your Apple manual.

Thank you,

*Rolland Love*

Rolland Love  
President

P.S. We would like to say "Thank you" to all the people and companies involved for their effort, help and support in compiling this book. A special thanks to Pat Copeland, Rob Schmitz and Bill Atchison for all their hard work, long hours and super input.

This book is the most accurate and comprehensive review of Apple Computer compatible programs and accessories I have seen. The format is clear and concise while the information is timely and accurate. It is a 'must have' book for every Apple Computer System.

The Apple Computer System has been referred to in many ways. I have heard the system called a Mind Appliance, a Productivity Tool, a Fourth Wave Machine, and a Volkswagen Computer. In fact, the Apple Computer System is all of the above. The uses and applications of the Apple Computer System are as unlimited as the imagination of the human spirit. I personally have witnessed the use of Apple Computers in laboratories for research, in classrooms for teaching, in offices for accounting and word processing and yes, even in the home for preparing personal budgets, bowling records for a league and writing irate letters to our elected officials. In fact, this present exercise in the printed word was prepared on my Apple.

The most often asked question about the Apple Computer System is - Can I do (fill in some task) with my Apple? This book goes a long way toward answering this question. Just pick a subject area, look it up in the index and you will find a number of sources for both the software and the accessories to get the job done.

Each program and accessory you look up is described with some applications listed. Sources are given so you can acquire the package or get more information if you need it.

I would strongly recommend that you talk to your local authorized Apple Dealer first. Perhaps the dealer has already sold and used the software you are interested in from this book. Your Local Apple Dealer is an Expert. If he has not used and/or previously sold the package you need, then let him contact the source for more information and act as your agent. Many software houses and accessory manufacturers are much more willing to spend time with an Apple Computer Retailer because of the prospect for multi-unit sales.

I'm sure you will enjoy your Apple Computer System. I am also sure this book will supply many answers and sources of programs and accessories you will use with your Apple Computer System.

Happy computing

Dennis Jolly  
Regional Sales Manager  
Apple Computer, Inc.



## GUIDE TO USING THIS BOOK



### IMPORTANT

Take a few minutes to read this guide section on the ease of using this book. It will save you time and let you take full advantage of the tremendous amount of information contained in the directory.

Software is divided into main subject categories. Business, Word Processing, etc. Refer to pages listed for descriptions of programs pertaining to that heading. In the front of the book is located a main index which lists programs by subject matter. In front of each subject section is located an index of that section. In some categories there are two sections. Check both sections for listing. (i.e. Educational programs will have the E- with a number, E-19; which simply tells you Educational section page 19; or CPM section would have all of its page numbers, CPM-, then the page numbers, CPM-1). Categories with 2 sections have the number 2 appear before the subject code, ex. 2CPM-10 (second section of CPM category- page 10).

Programs are listed by Title: Be sure to look carefully through each section. Some titles may be misleading or don't describe what the program actually does.

Published by: Publisher or manufacturer or distributor or dealer.

Description: A basic description of the program. Some titles are very obvious, while a good description is needed for others.

Price: Prices may change without notice. No price appears in some cases, especially Peripherals. This is because they might change. We recommend your local dealer for purchasing these programs.

The publisher, along with their contact information, appear in the back of the directory under (V) for Vendor List. Contact the vendor or your computer dealer for additional program information. Advanced Software Technology, Inc. distributes only those programs where we are listed as the publisher. Advanced Software Technology, Inc. accepts no responsibility for the quality of these programs and assumes no liability for use of information contained in these pages.

## VANLOVES APPLE INFO PAC



If you are:

A computer dealer, software publisher, consultant, manufacturer, book publisher, software distributor or anyone else dealing with the Apple Computer, "Vanloves Apple Info Pac" will be of interest to you.

Advanced Software Technology, Inc. has continued efforts to provide you with the most comprehensive up to date information on software, peri-pherals and other developments of interest for the Apple Computer. We now offer the "Apple Info Pac", a quick reference information data base, developed as a result of the compilation of Vanloves 1983 Apple II/III Software Directory.

The Info is supplied in a series of Apple DOS 3.3 disks and provides you with the following:

A condensed version of the 1983 Apple II/III Software Directory that you can access for immediate reference, and generate your own custom information. You can add and delete names, addresses, phone numbers, and prices. You can enhance program descriptions in the directory. You can generate mailing labels and report programs by any criteria from the Vendors (publishers), Apple Computer Clubs and Apple Computer Dealers section lists. What we are now offering Info Pac is your own custom information data base.

All reports in the Apple Info Pac were written by the Report Writer in Applesoft basic to facilitate easy modification. The Report Writer is part of the Vanloves Program Writer/Reporter package.

Vanloves Apple Info Pac - \$200.00

Includes the Apple Info Pac disk series and one copy of Vanloves 1983 Apple II/III Software Directory.

Updates will be available quarterly for \$50.00.



## TABLE OF CONTENTS

INTRODUCTION

INTRODUCTION FROM APPLE COMPUTER

GUIDE TO USING THIS BOOK

VANLOVES APPLE INFOPAC

SOFTWARE TABLE OF CONTENTS

AGRICULTURE

APPLE III

BUSINESS

- Accounts Payable
- Accounts Receivable
- Financial Modeling/Planning
- General Accounting
- General Ledger
- Inventory Control
- Job Control
- Miscellaneous
- Payroll
- Real Estate
- Stock Market
- Taxes

COMMUNICATIONS

CP/M - Z80 SOFTCARD

- Business
- Communications
- Data Base
- Mail Lists
- Medical
- Peripherals
- Programming Aids/Utilities
- Word Processing

DATA BASE

EDUCATION

- Administration and Counselling
- Computer Aided/Assisted Instruction
- English/Grammar
- Foreign Languages
- Graphics
- Library Science
- Mathematics
- Miscellaneous
- Music
- Science
- Social Studies

ENGINEERING

GAMES

- Adventure
- Arcade Games
- Gambling
- Strategy Games

GRAPHICS

HARD DISK

MAILING LIST

MATHEMATICS

**MEDICAL**

Business/Billing  
Education  
Treatment/Diagnostic

**MUSIC/SOUND RELATED**

**PERSONAL/HOME USE**

**PROGRAMMING AIDS/UTILITIES**

Applesoft Utilities  
Assemblers  
Compilers  
Disk Utilities  
Languages  
Miscellaneous  
Pascal Utilities  
Sorts

**SPECIAL INTEREST**

**TIME SHARING**

**WORD PROCESSING**

**APPLE CLUBS**

**VENDOR LIST**

**VENDOR PROGRAM CROSS REFERENCE**

**GLOSSARY**



# SOFTWARE TABLE OF CONTENTS

## AGRICULTURE INTRODUCTION

### AGRICULTURE

205 DAY ADJUSTED WEANING WEIGHTS . . . . .	AG-1
AG-ANALYSIS . . . . .	AG-1
AGRICALC . . . . .	AG-2
BEEF FEEDER PROJECTION . . . . .	AG-3
BEEF FEEDLOT RECORDS AND ANALYSIS . . . . .	AG-3
BEEF PRODUCTION . . . . .	AG-3
BUDGET ANALYSIS . . . . .	AG-4
BUDGETING SYSTEM . . . . .	AG-4
CALF PRODUCTION RECORDS . . . . .	AG-4
CASH CROP PROJECTION . . . . .	AG-4
CATTLE FEEDING ECONOMICS . . . . .	AG-4
COMMERCIAL CATTLE FEEDING PROGRAM . . . . .	AG-4
COMPULIZE SYSTEM . . . . .	AG-5
COMPUTERIZED FARM ACCOUNTING SYSTEM (CFAS) . . . . .	AG-6
COMPUTERIZED FARM RECORDS . . . . .	AG-6
CORN HARVEST LOSSES . . . . .	AG-7
CORN VS. AN ALTERNATE CROP . . . . .	AG-7
CORN/SOYBEAN MANAGEMENT SERIES ONE . . . . .	AG-7
COW-CALF PROFITABILITY . . . . .	AG-8
CROP HISTORY . . . . .	AG-8
CROP MANAGEMENT PACKAGE . . . . .	AG-8
CROP PRODUCTION . . . . .	AG-8
CROP YIELDS . . . . .	AG-9
CUSTOM MEAT PROCESSING SYSTEM . . . . .	AG-9
CYBER-FARMER . . . . .	AG-9
DAIRY ENTERPRISE ANALYSIS SYSTEM . . . . .	AG-9
DAIRY HERD MANAGEMENT PACKAGE . . . . .	AG-10
DAIRY HERD MANAGEMENT SYSTEM . . . . .	AG-10
DAIRY PRODUCTION . . . . .	AG-10
DAIRY, BEEF, AND SWINE RATIONS . . . . .	AG-10
DAY ADJUSTED WEANING WEIGHTS . . . . .	AG-11
DEPRECIATION LOG . . . . .	AG-11
ECONOMICS OF CORN PRODUCTION . . . . .	AG-11
F.A.R.M. . . . .	AG-11
FARM ANALYST . . . . .	AG-11
FARM LEDGER . . . . .	AG-12
FARM MANAGEMENT DECISIONS . . . . .	AG-12
FARM RECORDS . . . . .	AG-12
FARMCALC W/MODELS . . . . .	AG-13
FARMER'S WORKBOOK . . . . .	AG-13
FARMFILER W/MODELS . . . . .	AG-13
FARROW-TO-FINISH SWINE PRODUCTION . . . . .	AG-13
FEEDER . . . . .	AG-13
FEEDER PIG PRODUCTION . . . . .	AG-14
FERTILIZER FORMULATION . . . . .	AG-14
FERTILIZER RECOMMENDATIONS PACKAGE . . . . .	AG-14
FIELD & CROP RECORDS SYSTEM . . . . .	AG-14
FIELD POPULATION . . . . .	AG-14
FIELD SIZE . . . . .	AG-14
FINANCIAL UTILITIES . . . . .	AG-15
FINISHING FEEDER PIGS . . . . .	AG-15
GENERAL LEDGER SYSTEM . . . . .	AG-15
HOG FARROWING PROJECTION . . . . .	AG-15
HOG MANAGEMENT PACKAGE . . . . .	AG-15

HOG PRODUCTION . . . . .	AG-16
LEAST COST RATION FORMULATION . . . . .	AG-16
LIMING SOIL . . . . .	AG-16
LIQUID MANURE AND FERTILIZER . . . . .	AG-16
LIVESTOCK BREAK-EVEN ANALYSIS . . . . .	AG-16
MACHINERY MANAGEMENT SERIES ONE . . . . .	AG-17
NET ENERGY FOR FEEDLOT CATTLE . . . . .	AG-17
PIG PACKAGE . . . . .	AG-18
PROTEIN BALANCING FOR FEEDLOT CATTLE . . . . .	AG-18
SEED CORN DEALER'S SYSTEM . . . . .	AG-18
SELLING WET CORN VS. DRY . . . . .	AG-18
SHEEP PRODUCTION ECONOMICS . . . . .	AG-18
SOIL TEST RECOMMENDATION . . . . .	AG-18
SOYBEAN HARVEST LOSSES . . . . .	AG-18
SWINE ENTERPRISE ANALYSIS SYSTEM . . . . .	AG-19
SWINE RATION ANALYSIS . . . . .	AG-19
SWINE MANAGEMENT SYSTEM (B.O.A.R.S.) . . . . .	AG-19
THE CALENDAR . . . . .	AG-19
TURKEY ENTERPRISE ANALYSIS SYSTEM . . . . .	AG-20
VISICALC AGRI-DATA . . . . .	AG-20
WORKSHEET . . . . .	AG-20

## APPLE III INTRODUCTION

### APPLE III

APPLE ACCESS III . . . . .	APIII-1
APPLE BUSINESS BASIC . . . . .	APIII-2
APPLE III BUSINESS GRAPHICS . . . . .	APIII-4
APPLE III COBOL . . . . .	APIII-4
APPLE III PASCAL . . . . .	APIII-5
APPLE III RECORD PROCESSING SERVICES (RPS) . . . . .	APIII-6
APPLE III SOPHISTICATED OPERATING SYSTEM (SOS) . . . . .	APIII-7
APPLE SOFTCARD III SYSTEM . . . . .	APIII-8
BANKER'S CONSTRUCTION LOAN REPORTER . . . . .	APIII-8
BUDGET MODEL . . . . .	APIII-8
COMMERCIAL ACCOUNT PROFITABILITY ANALYSIS . . . . .	APIII-9
COMPUTER CASES . . . . .	APIII-9
CONJOB . . . . .	APIII-9
CONSTRUCTION BOOKKEEPER . . . . .	APIII-10
CONSTRUCTION MATERIAL LIST GENERATOR . . . . .	APIII-10
COST ACCOUNTANT . . . . .	APIII-10
CYTRON MASTERS . . . . .	APIII-10
DATA BASE III . . . . .	APIII-11
DATA MANAGER FOR WEATHER OBSERVATIONS . . . . .	APIII-11
DESKTOP/PLAN . . . . .	APIII-12
EASY (EXECUTIVE ACCOUNTING SYSTEM) . . . . .	APIII-12
GALACTIC GLADIATORS . . . . .	APIII-13
GL-PLUS . . . . .	APIII-13
GUADALCANAL CAMPAIGN . . . . .	APIII-14
HURRICANE TRACKING PROGRAM . . . . .	APIII-15
INDIVIDUAL U.S. INCOME TAX PACKAGE . . . . .	APIII-15
JOB CONTROL SYSTEM . . . . .	APIII-16
JOB SCHEDULING . . . . .	APIII-16
LEXICHECK . . . . .	APIII-17
MAIL LIST MANAGER . . . . .	APIII-17
MAIL LIST MANAGER INTERFACE . . . . .	APIII-19
MEDICAL CLINIC . . . . .	APIII-20
MEMOMINDER . . . . .	APIII-20
MULTI-YEAR PLANNING MODEL . . . . .	APIII-21
PAYROLL MODULE . . . . .	APIII-21
PHD . . . . .	APIII-21
PROFILE . . . . .	APIII-22
QUICK & EASY DATA MASTER . . . . .	APIII-24



QUICK FILE III . . . . .	APIII-24
REPORT WRITER . . . . .	APIII-25
S.E.U.I.S. . . . .	APIII-25
SALES ORDER ENTRY III . . . . .	APIII-26
SCRIPT III . . . . .	APIII-26
SERVICE CHARGE ANALYSIS AND PRICING MODEL . . . . .	APIII-27
SMART . . . . .	APIII-27
SOSCLOCK III . . . . .	APIII-29
SUPERPLOT . . . . .	APIII-29
SURVEYOR'S AIDE . . . . .	APIII-29
THE AGRICULTURAL SOFTWARE PACKAGE . . . . .	APIII-29
THE APPLE III INFORMATION ANALYST . . . . .	APIII-33
THE APPLE III WORD PROCESSOR . . . . .	APIII-35
THE COSMIC BALANCE . . . . .	APIII-36
THE HARDISK ACCOUNTING SERIES . . . . .	APIII-37
TRANSCRIBE . . . . .	APIII-38
TYPEFACE . . . . .	APIII-39
VERSA FORM . . . . .	APIII-40
VISICALC III . . . . .	APIII-42
VISISCHEDULE . . . . .	APIII-44
WORD III . . . . .	APIII-44
WORD JUGGLER . . . . .	APIII-45
WORD PAINTER . . . . .	APIII-46
WORD WEAVER II . . . . .	APIII-48

## BUSINESS INTRODUCTION

### BUSINESS

#### ACCOUNTS PAYABLE

ACCOUNTS PAYABLE . . . . .	BUS-1
ACCOUNTS PAYABLE . . . . .	BUS-1
ACCOUNTS PAYABLE . . . . .	BUS-1
ACCOUNTS PAYABLE . . . . .	BUS-1
ACCOUNTS PAYABLE . . . . .	BUS-1
MICROPAY . . . . .	BUS-2
SYSTEMS II EX - ACCOUNTS PAYABLE . . . . .	BUS-2
THE COMPUTER PROGRAMMED ACCOUNTANT CPA 3 ACCOUNTS PAYABLE . . . . .	BUS-3

#### ACCOUNTS RECEIVABLE

ACCOUNTS RECEIVABLE . . . . .	BUS-4
ACCOUNTS RECEIVABLE . . . . .	BUS-4
ACCOUNTS RECEIVABLE . . . . .	BUS-4
ACCOUNTS RECEIVABLE . . . . .	BUS-4
ACCOUNTS RECEIVABLE . . . . .	BUS-5
ACCOUNTS RECEIVABLE . . . . .	BUS-5
ACCOUNTS RECEIVABLE . . . . .	BUS-5
ACCOUNTS RECEIVABLE SYSTEM . . . . .	BUS-6
INTEREST PRINT . . . . .	BUS-6
MICROREC . . . . .	BUS-6
RECEIVER . . . . .	BUS-7
SYSTEMS II EX - ACCOUNTS RECEIVABLE . . . . .	BUS-7
THE COMPUTERPROGRAMMED ACCOUNTANTCPA 2 ACCOUNTS REC. . . . .	BUS-7

## FINANCIAL MODELING/PLANNING

APM . . . . .	BUS-9
APPLE II SENIOR ANALYST . . . . .	BUS-9
APR LOAN ANALYSIS . . . . .	BUS-10
BASIC INDIVIDUAL RETIREMENT ACCOUNT . . . . .	BUS-10
BUSINESS PLANNER . . . . .	BUS-10
BUSINESS VALUATION ANALYSIS . . . . .	BUS-10

CAPITAL INVESTMENT ANALYSIS . . . . .	BUS-11
CASH-FLOW ANALYSIS . . . . .	BUS-11
COMMERCIAL ACCOUNT PROFITABILITY ANALYSIS . . . . .	BUS-11
CONSTRUCTION COST/PROFIT ANALYSIS . . . . .	BUS-11
CORPORATION FEASIBILITY STUDY . . . . .	BUS-11
CREATIVE FINANCING . . . . .	BUS-12
DEPRECIATION . . . . .	BUS-12
DESKTOP/PLAN II . . . . .	BUS-13
DISCLOSURE STATEMENT . . . . .	BUS-13
ECONOMIC ANALYSIS GROUP . . . . .	BUS-14
ESTATE VALUATION ANALYSIS . . . . .	BUS-14
F.A.S.T. . . . .	BUS-14
FAMILY SECURITY NEEDS ANALYSIS (FSNA) . . . . .	BUS-15
FINANCIAL . . . . .	BUS-15
FINANCIAL GOALS ANALYSIS . . . . .	BUS-15
FINANCIAL MANAGEMENT SYSTEM III WITH CHECKWRITER III . . . . .	BUS-16
FIXED ASSETS . . . . .	BUS-17
KEOGH . . . . .	BUS-17
KISS FINANCIAL PROGRAMS . . . . .	BUS-17
LEDGER STATEMENT - WHOLE LIFE . . . . .	BUS-18
LOAN AMORTIZATION . . . . .	BUS-18
LOAN DEPRECIATION . . . . .	BUS-18
LOAN REDUCTION ANALYSIS . . . . .	BUS-18
MICRO-DYNAMO . . . . .	BUS-18
MINIMUM DEPOSIT PROGRAM . . . . .	BUS-19
MOD WHOLE LIFE (DEPOSIT TERM) LEDGER . . . . .	BUS-19
MORTGAGE ACCELERATION PROGRAM (MAP) . . . . .	BUS-19
MULTI-YEAR PLANNING MODEL . . . . .	BUS-20
OPTIONS 80 . . . . .	BUS-20
ORDER TRACKING SYSTEM . . . . .	BUS-20
PERSONAL FINANCE MASTER . . . . .	BUS-21
PLAN80 . . . . .	BUS-21
PROJECT CONTROL AND REPORTING (CORE) . . . . .	BUS-22
PROJECT PLANNING AND ANALYSIS (PAL) . . . . .	BUS-23
QUIKDIRT - CAPITAL BUDGETING . . . . .	BUS-24
QUIKDIRT - CASH REPLENISHMENT . . . . .	BUS-24
RESTAURANT PROFIT ANALYSIS . . . . .	BUS-24
RETIRED LIVES RESERVE . . . . .	BUS-25
SECTION 79 . . . . .	BUS-25
SERVICE CHARGE ANALYSIS AND PRICING MODEL . . . . .	BUS-25
SPLIT DOLLAR . . . . .	BUS-25
STATEMENT OF NET WORTH . . . . .	BUS-26
TAX DEFERRED ANNUITY VS. NON TAX DEFERRED SAVINGS . . . . .	BUS-26
TERM INSURANCE ILLUSTRATION . . . . .	BUS-26
TERM/WHOLE LIFE COMPARISON . . . . .	BUS-26
THE ACCOUNTANT . . . . .	BUS-27
THE IRA ASSESSOR . . . . .	BUS-27
THE RETIREMENT PLANNER . . . . .	BUS-28
VERSACALC 16 . . . . .	BUS-28
VISICALC . . . . .	BUS-29
VISISCHEDULE . . . . .	BUS-30
VISITREND VISIPILOT . . . . .	BUS-31

## GENERAL ACCOUNTING

ACCOUNT KEEPER . . . . .	BUS-33
ACCOUNTANT/COMPLETE ACCOUNTING SYSTEM . . . . .	BUS-33
ACCOUNTS RECEIVABLES/PAYABLE . . . . .	BUS-33
APPLE CHAMP . . . . .	BUS-34
APPLE TRAC . . . . .	BUS-34
ASSET MANAGER . . . . .	BUS-34
BUSICOMP . . . . .	BUS-34
BUSINESS ACCOUNTING PACKAGE . . . . .	BUS-35
BUSINESS SOFTWARE SERIES . . . . .	BUS-35



CLIENT RECORDS/BILL PREPARATION . . . . .	BUS-36
CONJOB . . . . .	BUS-36
CONSTRUCTION BOOKKEEPER . . . . .	BUS-37
COST ACCOUNTANT . . . . .	BUS-37
FINANCIAL PARTNER . . . . .	BUS-37
GENERAL ACCOUNTING SYSTEM . . . . .	BUS-38
INCOMPLETE RECORDS ACCOUNTING SYSTEM . . . . .	BUS-39
PERFORMANCE MANAGER . . . . .	BUS-39
PURCHASE LEDGER SYSTEM . . . . .	BUS-40
SALES LEDGER SYSTEM . . . . .	BUS-40
SMALL BUSINESS SOFTWARE . . . . .	BUS-40
SYSTEMS II EX . . . . .	BUS-41
THE ANALYZER . . . . .	BUS-42
THE B.O.S.S. . . . .	BUS-42
THE CONTROLLER . . . . .	BUS-43
THE CONTROLLER (GBSI) . . . . .	BUS-44
THE UNIVERSAL COMPUTING MACHINE . . . . .	BUS-44
THINKER . . . . .	BUS-44

## GENERAL LEDGER

ABACUS . . . . .	BUS-45
ACCOUNTING PLUS II . . . . .	BUS-45
ACCTS. PAYABLE/RECEIVABLE . . . . .	BUS-47
B.I.S. GENERAL LEDGER ON LINE . . . . .	BUS-47
EZ-LEDGER . . . . .	BUS-47
GENERAL LEDGER . . . . .	BUS-48
GENERAL LEDGER . . . . .	BUS-48
GENERAL LEDGER . . . . .	BUS-49
GENERAL LEDGER . . . . .	BUS-49
GENERAL LEDGER . . . . .	BUS-49
GENERAL LEDGER . . . . .	BUS-50
GENERAL LEDGER . . . . .	BUS-50
GENERAL LEDGER . . . . .	BUS-50
GENERAL LEDGER MODULE . . . . .	BUS-51
GENERAL LEDGER PACKAGE . . . . .	BUS-52
GENERAL LEDGER WITH PAYABLES . . . . .	BUS-52
HAYES CONDENSED GENERAL LEDGER PROGRAM . . . . .	BUS-53
LEDGERPLUS . . . . .	BUS-54
MAXILEDGER . . . . .	BUS-55
MICRO-GENERAL LEDGER . . . . .	BUS-55
MICROACCOUNTANT . . . . .	BUS-56
MICROLEDGER . . . . .	BUS-56
NO-NONSENSE BOOKS . . . . .	BUS-57
SUPERLEDGER . . . . .	BUS-57
SYSTEMS II EX - GENERAL LEDGER . . . . .	BUS-57
THE COMPUTER PROGRAMMED ACCOUNTANT CPA-1 GENERAL LEDGER . . . . .	BUS-57

## INVENTORY CONTROL

INVENTORY CONTROL . . . . .	BUS-58
INVENTORY MANAGEMENT SYSTEM FOR STOCK CONTROL . . . . .	BUS-58
INVENTORY PROGRAM . . . . .	BUS-59
MICRO-INVENTORY . . . . .	BUS-59
MICROBOMB . . . . .	BUS-59
MICROINV . . . . .	BUS-60
QUIKDIRT - IN-PROCESS INVENTORY . . . . .	BUS-60
QUIKDIRT - WAREHOUSE LOCATION . . . . .	BUS-61
STOCKROOM . . . . .	BUS-61
SUPERFOX . . . . .	BUS-61
SYSTEMS II EX - INVENTORY . . . . .	BUS-62
THE CASHIER . . . . .	BUS-62
THE INVENTORY CONTROL SYSTEM . . . . .	BUS-63
THE INVENTORY MANAGER . . . . .	BUS-63
THE ORDER SCHEDULER . . . . .	BUS-63

THE STORE MANAGER . . . . .	BUS-63
JOB CONTROL	
JOB CONTROL SYSTEM . . . . .	BUS-64
JOB COST SYSTEM . . . . .	BUS-64
JOB COSTING SYSTEM . . . . .	BUS-64
JOB SCHEDULING . . . . .	BUS-65
SYSTEMS II EX - SYSTEMS II JOB COSTING MODULE . . . . .	BUS-65

# MISCELLANEOUS

ADVERTISING MESSAGE PROGRAM FOR APPLE . . . . .	BUS-66
AMWAY DISTRIBUTORS PROGRAM . . . . .	BUS-66
APPLE BOWLING SECRETARY . . . . .	BUS-66
APPLELOG . . . . .	BUS-66
APPLESACK 1 - 40 PRACTICAL PROGRAMS . . . . .	BUS-66
APPOINTMENTS . . . . .	BUS-67
BOWLING DATA SYSTEM . . . . .	BUS-67
BOWLING LEAGUE RECORD SYSTEM . . . . .	BUS-68
BOWLING TOURNAMENT RECORDS . . . . .	BUS-68
BUSINESS PACKAGE I . . . . .	BUS-69
BUSINESS PACKAGE III . . . . .	BUS-69
BUSINESS VALUATION . . . . .	BUS-69
CAPITAL NEED ANALYSIS DISABILITY INCOME SUPPLEMENT . . . . .	BUS-70
CAPITAL NEED ANALYSIS HYPOTHETICAL PROBATE SUPPLEMENT . . . . .	BUS-70
CAPITAL NEED ANALYSIS . . . . .	BUS-70
CASHMASTER . . . . .	BUS-70
CASHMASTER . . . . .	BUS-70
CHECKWRITER . . . . .	BUS-70
CHECKWRITER II . . . . .	BUS-70
CLIENT BILLING SYSTEM (C.B.S.) . . . . .	BUS-71
COLOR CALENDAR . . . . .	BUS-72
COMPU-LAW (THE LAW OFFICE MANAGEMENT SYSTEM) . . . . .	BUS-72
CONSTRUCTION MATERIAL LIST GENERATOR . . . . .	BUS-73
DAYMASTER . . . . .	BUS-74
DECISION MASTER . . . . .	BUS-74
DEPRECIATION/CRITICAL PATH/PROFIT ANALYSIS . . . . .	BUS-75
DISPATCH . . . . .	BUS-75
EASY FORM . . . . .	BUS-75
ELECTRONIC PRICE SHEET . . . . .	BUS-75
EXPLORE AND CHART AUDIENCE . . . . .	BUS-76
FINANCE I . . . . .	BUS-77
FINANCIAL MANAGEMENT SYSTEM II . . . . .	BUS-77
INSURANCE BROKING SYSTEM . . . . .	BUS-77
LEGAL CLERK . . . . .	BUS-78
LIFECALC . . . . .	BUS-78
MANNA . . . . .	BUS-78
MANUFACTURING COST ESTIMATE . . . . .	BUS-80
MONEY MANAGEMENT ASSESSMENT SERIES . . . . .	BUS-80
MULTI-MESSAGE AD . . . . .	BUS-80
OFFICE MANAGER . . . . .	BUS-80
OIL AND GAS COMPANION . . . . .	BUS-81
ORDER ENTRY . . . . .	BUS-81
PDP-PROGRAM DIRECTOR'S PLANNER PACKAGE . . . . .	BUS-82
PHONE DIRECTORY . . . . .	BUS-82
PRACTICAL BASIC PROGRAMS . . . . .	BUS-82
PROFESSIONAL TIME & BILLING . . . . .	BUS-82
PROFESSIONAL TIMEKEEPING SYSTEM . . . . .	BUS-83
PROJECT BOSS . . . . .	BUS-83
PROJECT MANAGEMENT GROUP . . . . .	BUS-84
PROJECT PLANNING . . . . .	BUS-84
PROJECT SCHEDULE ANALYSIS I . . . . .	BUS-84
QUIKDIRT - PRODUCTION SCHEDULING . . . . .	BUS-85

QUICKDIRT - TRANSPORTATION PLANNING . . . . .	BUS-85
RECALL - (THE ARBITRON ANALYSIS PACKAGE) . . . . .	BUS-85
RETAIL MANAGER . . . . .	BUS-86
ROUTEPLANNER . . . . .	BUS-86
SHOULD YOU INCORPORATE? . . . . .	BUS-86
SOME COMMON BASIC PROGRAMS . . . . .	BUS-87
THE AGENCY DATA MANAGEMENT SYSTEM . . . . .	BUS-87
THE BUDGETEER . . . . .	BUS-87
THE DEACON-CHURCH MEMBERSHIP SYSTEM . . . . .	BUS-87
THE ESTIMATOR . . . . .	BUS-88
THE INVOICE FACTORY . . . . .	BUS-88
THE LIFE INSURANCE CLIENT MANAGEMENT SYSTEM . . . . .	BUS-88
THE PRICE QUOTER . . . . .	BUS-88
THE PRINTER'S ESTIMATOR . . . . .	BUS-90
THE STEWARD - CHURCH CONTRIBUTION SYSTEM . . . . .	BUS-90
THE TRUSTEE - CHURCH FINANCE SYSTEM . . . . .	BUS-91
THE ULTRA PLOT/DIF DATAGRAPH . . . . .	BUS-91
THE UNDERWRITER . . . . .	BUS-92
TIME & MONEY METER . . . . .	BUS-93
TIME CLOCK II . . . . .	BUS-93
UNIDEP . . . . .	BUS-93
UNIVERSAL BUSINESS MACHINE . . . . .	BUS-93
V.I.P. II . . . . .	BUS-93
VISI-CAIDS . . . . .	BUS-94
VISIPLOT . . . . .	BUS-94
VTC SYSTEM PACKAGE . . . . .	BUS-95

## PAYROLL

ACCUREC TIME RECORDER/WAGE SUMMARY PROGRAM . . . . .	BUS-96
ADVANCED PAYROLL PACKAGE . . . . .	BUS-96
MICROPSERS . . . . .	BUS-97
PAYMASTER . . . . .	BUS-98
PAYMASTER . . . . .	BUS-98
PAYROLL . . . . .	BUS-98
PAYROLL . . . . .	BUS-99
PAYROLL . . . . .	BUS-99
PAYROLL . . . . .	BUS-100
PAYROLL FOR THE APPLE II PLUS . . . . .	BUS-100
PAYROLL MODULE . . . . .	BUS-100
PAYROLL PACKAGE . . . . .	BUS-100
PAYROLL SYSTEM . . . . .	BUS-101
PAYROLL/COST DISTRIBUTION SYSTEM . . . . .	BUS-101
PAYROLL/PERSONNEL . . . . .	BUS-101
PAYSYSTEM ACCOUNTANT . . . . .	BUS-102
SYSTEMS II EX - PAYROLL . . . . .	BUS-102
THE COMPUTER PROGRAMMED ACCOUNTANT CPA 4 PAYROLL . . . . .	BUS-103
TPS CANADIAN PAYROLL SYSTEM . . . . .	BUS-103

## REAL ESTATE

APARTMENT MANAGER . . . . .	BUS-104
APARTMENT MANAGER PROGRAM . . . . .	BUS-104
FINANCIAL PACKAGE . . . . .	BUS-104
HOME PURCHASE ANALYSIS . . . . .	BUS-105
INCOME PROPERTY ANALYSIS . . . . .	BUS-105
PROPERTY LISTING AND COMPARABLES . . . . .	BUS-106
PROPERTY MANAGEMENT . . . . .	BUS-106
PROPERTY MANAGEMENT SYSTEM . . . . .	BUS-107
PROPERTY SALES ANALYSIS . . . . .	BUS-107
REAL ESTATE ANALYSIS MODULES . . . . .	BUS-108
REAL ESTATE ANALYZER . . . . .	BUS-108
REAL ESTATE TEMPLATES . . . . .	BUS-108
REAL-SOFT . . . . .	BUS-109



RENT VS. BUY . . . . .	BUS-109
RENTAL MANAGER . . . . .	BUS-109
TAX DEFERRED EXCHANGE MODEL . . . . .	BUS-110
THE LANDLORD . . . . .	BUS-110
THE RENTAL MANAGER . . . . .	BUS-111

## STOCK MARKET

ANAL . . . . .	BUS-112
ANNUAL REPORT ANALYZER . . . . .	BUS-112
BONDS . . . . .	BUS-112
COMMODITIES TRANSACTIONS . . . . .	BUS-112
COMPUTERIZED STOCK MARKET ANALYSIS . . . . .	BUS-112
CYBER - TECH STOCK VALUATION PROGRAM . . . . .	BUS-114
DOW JONES SERIES PORTFOLIO EVALUATOR . . . . .	BUS-114
INTELLIGENT INVESTOR SERIES 1 . . . . .	BUS-115
INVESTMENT DATA SYSTEM . . . . .	BUS-116
MARKET ADVISOR . . . . .	BUS-116
MARKET CHARTER . . . . .	BUS-116
MARKET TRACKER . . . . .	BUS-117
MONEY BEE I . . . . .	BUS-117
MONEYBEE IX . . . . .	BUS-117
N2 MARKET ANALYZER (TM) . . . . .	BUS-117
PORTFOLIO EVALUATOR . . . . .	BUS-118
PORTFOLIO MASTER 3.1 . . . . .	BUS-118
STOCK CONTROL SYSTEM . . . . .	BUS-118
STOCK FORECASTING SYSTEM . . . . .	BUS-119
STOCK OPTION VALUATION . . . . .	BUS-119
STOCK OPTIONS . . . . .	BUS-119
STOCK PORTFOLIO . . . . .	BUS-120
STOCK PORTFOLIO SYSTEM . . . . .	BUS-120
STOCK TRACKER (VER. 3.5) . . . . .	BUS-120
STOCKFILE . . . . .	BUS-121
STOCKFILE (MULTI-USER) . . . . .	BUS-122
STOCKMAKER . . . . .	BUS-122
STOCKSELLER . . . . .	BUS-122
TECHNI-TRAC . . . . .	BUS-123
THE COMPUTING INVESTOR . . . . .	BUS-123
THE SMART ANALYSIS AND GRAPHICS PACKAGE . . . . .	BUS-124
TRADER . . . . .	BUS-125

## TAXES

ESTATE TAX PLAN . . . . .	BUS-126
HAYES FEDERAL TAX VISICALC TAX TEMPLATES . . . . .	BUS-127
INDIVIDUAL TAX PLAN . . . . .	BUS-127
MICRO TAX/SERIES . . . . .	BUS-128
PERSONAL TAX PLAN . . . . .	BUS-129
SHORTAX . . . . .	BUS-130
TAX ADVISOR . . . . .	BUS-131
TAX BEATER . . . . .	BUS-131
TAX PLANNER . . . . .	BUS-132
TAX PREPARATION . . . . .	BUS-133
TAX PREPARER . . . . .	BUS-134
TAX-MANAGER . . . . .	BUS-134

## COMMUNICATIONS

ANSWERING MACHINE . . . . .	CM-1
APPLE BULLETIN BOARD SYSTEM/ABBS . . . . .	CM-1
APPLE CAT II . . . . .	CM-1
APPLE TERMINAL . . . . .	CM-2
ASCII EXPRESS II . . . . .	CM-3
AUTO-CAT . . . . .	CM-3

AUTO-MODEM . . . . .	CM-4
B.I.T.S. . . . .	CM-5
BASIC INTERACTIVE TERMINAL SOFTWARE (B.I.T.S.) . . . . .	CM-5
CORVUS MULTIPLEXER . . . . .	CM-6
D-CAT . . . . .	CM-7
DATA CAPTURE 4.0 . . . . .	CM-8
DATA*TRANS . . . . .	CM-8
DATACOMM . . . . .	CM-9
DATALINK . . . . .	CM-9
DISK LOGBOOK . . . . .	CM-9
EASYMOVER . . . . .	CM-10
FIRST EDITION . . . . .	CM-10
FLEXITERM . . . . .	CM-11
HANDICAPPED TYPEWRITER . . . . .	CM-11
HIGH SPEED TERMINAL PROGRAM . . . . .	CM-12
INTELLIGENT KEYPUNCH . . . . .	CM-12
MICRO-COMMUNICATOR . . . . .	CM-12
MICRO-COURIER . . . . .	CM-13
MICRO-TELEGRAM . . . . .	CM-13
MICROMODEM II . . . . .	CM-14
MICROMODEM II DISK . . . . .	CM-14
MODEM MAGIC 2.0 . . . . .	CM-15
NET-WORKS . . . . .	CM-15
OMNINET LOCAL NETWORK . . . . .	CM-17
ONLINE . . . . .	CM-17
OPERATOR . . . . .	CM-17
P.I.T.S. . . . .	CM-18
PASCAL UTILITY MICROMODEM PACKAGE (PUMP) . . . . .	CM-19
PHONE SECRETARY . . . . .	CM-19
PICTURE TRANSFER PROGRAM . . . . .	CM-20
SIGNALMAN MARK I MODEM . . . . .	CM-20
SMARTMODEM . . . . .	CM-21
SNOWATCH . . . . .	CM-22
TELEPHONE TRANSFER PROGRAM . . . . .	CM-22
TERMINAL PROGRAM . . . . .	CM-22
THE CONTEXT CONNECTOR . . . . .	CM-23
THE N.E.X.U.S . . . . .	CM-23
TRANSEND DATA COMMUNICATIONS SOFTWARE . . . . .	CM-24
VISITERM . . . . .	CM-24
VT100 EMULATOR . . . . .	CM-24
WRITE EDIT & SEND . . . . .	CM-25

## CP/M - Z80 SOFTCARD

### BUSINESS

40 ACCOUNTING SERIES ACCOUNTS PAYABLE . . . . .	CP/M-1
40 ACCOUNTING SERIES ACCOUNTS RECEIVABLE . . . . .	CP/M-2
40 ACCOUNTING SERIES GENERAL LEDGER . . . . .	CP/M-3
40 ACCOUNTING SERIES INVENTORY . . . . .	CP/M-5
ACCOUNTS PAYABLE . . . . .	CP/M-6
CLIENT LEDGER SYSTEM . . . . .	CP/M-7
DATEBOOK . . . . .	CP/M-7
GENERAL LEDGER ACCOUNTING SYSTEM . . . . .	CP/M-8
GENERAL LEDGER II . . . . .	CP/M-8
GLECTOR . . . . .	CP/M-8
HOTEL-2000 . . . . .	CP/M-8
INSOFT ACCOUNTANT . . . . .	CP/M-8
INSURANCE AGENCY MANAGEMENT SYSTEM . . . . .	CP/M-9
INVENTORY . . . . .	CP/M-9
MASTER TAX . . . . .	CP/M-10
MICROSTAT . . . . .	CP/M-10
NURSING HOMES . . . . .	CP/M-10
PAYROLL WITH COST ACCOUNTING . . . . .	CP/M-10

PRODUCTION MANAGER . . . . .	CP/M-11
PROFESSIONAL CLIENT BILLING III . . . . .	CP/M-12
REAL ESTATE SOFTWARE PACKAGE . . . . .	CP/M-12
STANDARD TAX . . . . .	CP/M-13
STRUCTURED SYSTEMS GROUP . . . . .	CP/M-13
TOTAL LEDGER . . . . .	CP/M-13
TOTAL PAYROLL . . . . .	CP/M-14
TOTAL RECEIVABLES . . . . .	CP/M-14
9 OFFICE PRODUCTIVITY SERIES TELECOMMUNICATIONS . . . . .	CP/M-16

#### COMMUNICATIONS

BSTAM . . . . .	CP/M-17
CP/M TO APPLE CP/M . . . . .	CP/M-17
CROSSTALK . . . . .	CP/M-18
THE PROFESSIONAL SERIES . . . . .	CP/M-18
Z-TERM . . . . .	CP/M-20

#### DATA BASE

DBASE II . . . . .	CP/M-21
HIERARCHICAL DATA BASE SYSTEM/HDBS . . . . .	CP/M-21
PEARL . . . . .	CP/M-22
SELECTOR III-C2 . . . . .	CP/M-22
TM III . . . . .	CP/M-22
WHATSIT? . . . . .	CP/M-23

#### MAIL LISTS

9 OFFICE PRODUCTIVITY SERIES MAILING LIST MANAGER . . . . .	CP/M-24
NAD . . . . .	CP/M-25

#### MEDICAL

DENTAL MANAGEMENT SYSTEM . . . . .	CP/M-26
MEDICAL MANAGEMENT SYSTEM . . . . .	CP/M-26
THE MEDICAL OFFICE MANAGER . . . . .	CP/M-26

#### PERIPHERALS

LOADSTAR 8000 . . . . .	CP/M-28
-------------------------	---------

#### PROGRAMMING AIDS/UTILITIES

ALGOL-60 . . . . .	CP/M-29
APL/80 . . . . .	CP/M-29
BASIC COMPILER . . . . .	CP/M-29
BASIC UTILITY DISK . . . . .	CP/M-29
BASIC-80 . . . . .	CP/M-29
BDS C COMPILER . . . . .	CP/M-29
BUG and UBUG . . . . .	CP/M-30
CBASIC-2 . . . . .	CP/M-30
DEBUG I . . . . .	CP/M-30
DEBUG II . . . . .	CP/M-30
DESPOOL . . . . .	CP/M-30
EDIT . . . . .	CP/M-31
EDIT-80 . . . . .	CP/M-31
FORMS 2 . . . . .	CP/M-31
KBASIC . . . . .	CP/M-31
LINKER . . . . .	CP/M-31
M/SORT . . . . .	CP/M-31
MAC . . . . .	CP/M-32
MACRO II . . . . .	CP/M-32
MACRO-80 . . . . .	CP/M-32



MAGSAM III	CP/M-32
MAGSAM IV	CP/M-32
MULISP-80	CP/M-32
MUSIMP/MUMATH	CP/M-33
NEVADA COBOL	CP/M-33
PASCAL/M	CP/M-33
PASCAL/MT	CP/M-33
PASCAL/Z	CP/M-33
PASM	CP/M-33
PLINK	CP/M-34
QSORT	CR/M-34
RECLAIM	CP/M-34
SID	CP/M-34
STANDARD CIS COBOL	CP/M-34
TEX	CP/M-34
THE STRING BIT	CP/M-35
TINY C	CP/M-35
TOP	CP/M-35
VSORT	CP/M-35
XMACRO-86	CP/M-35
XYBASIC	CP/M-35
ZAPPLE	CP/M-36
ZEDIT	CP/M-36
ZSID	CP/M-36
ZTEL	CP/M-36

#### WORD PROCESSING

9 OFFICE PRODUCTIVITY SERIES PEACHTEXT WORD PROCESSOR	CP/M-37
9 OFFICE PRODUCTIVITY SERIES SPELLING PROOFREADER	CP/M-39
LETTERRIGHT	CP/M-40
MAGIC WAND	CP/M-40
MOONSHADOW TEXT FORMATTER/FOR UCSD PASCAL (TM)	CP/M-40
SPELLGUARD	CP/M-40
TEXTWRITER III	CP/M-41
WORD-MASTER	CP/M-41
WORD-STAR	CP/M-42
WORD-STAR-MAIL-MERGE	CP/M-42

#### DATA BASE

ACCESS	DB-1
ADVANCED DATA HANDLER	DB-2
APPLE LITERATURE DATABASE	DB-2
APPLE RECORD MANAGER	DB-2
CCA DATA MANAGEMENT SYSTEM	DB-2
DATA BASE MANAGEMENT	DB-3
DATA BASE MANAGEMENT SYSTEM	DB-3
DATA FACTORY	DB-4
DATA PERFECT	DB-5
DATA-HANDLER	DB-5
DATADIX	DB-5
DATAFAX	DB-6
DATAKEYPER	DB-6
DB MASTER - UTILITY PAK #1	DB-7
DB MASTER - UTILITY PAK #2	DB-7
DB MASTER REVISION THREE	DB-8
DB MASTER	DB-10
DISK LIBRARY	DB-11
FILE CREATOR/RETRIEVER	DB-11
FILE WHIZ (INFORMATIVE MANAGEMENT SYSTEM)	DB-12
FILEMASTER	DB-12
FORMULEX	DB-13
IFO-DATA BASE MANAGER PROGRAM (VERSION I)	DB-14

INFORMATION MASTER . . . . .	DB-14
INFOTREE . . . . .	DB-15
ISAM-DS . . . . .	DB-15
MICRO INFORMATION SYSTEM . . . . .	DB-16
MUSEUM COLLECTOR CATALOG . . . . .	DB-16
PASCAL DATABASE . . . . .	DB-16
PEGASUS: RELEASE 2 . . . . .	DB-17
PFS (PERSONAL FILING SYSTEM) . . . . .	DB-17
QUICK & EASY DATA MASTER . . . . .	DB-17
RECORD LIBRARY . . . . .	DB-18
REQUEST . . . . .	DB-18
SCIENTIST . . . . .	DB-19
STATPRO . . . . .	DB-19
THE AUDIOVISUAL CATALOGING SYSTEM . . . . .	DB-20
THE DATA REPORTER . . . . .	DB-20
THE MICROCONDUCTOR (TM) . . . . .	DB-20
THE MINI FACTORY . . . . .	DB-21
TRANSACTOR . . . . .	DB-21
VERSAFORM . . . . .	DB-21
VISIDEX . . . . .	DB-23
VISIFILE . . . . .	DB-24
Z65 DATA BASE PROCESSOR . . . . .	DB-25

## EVALUATION AND SELECTION OF EDUCATIONAL SOFTWARE

## COMPUTER ORGANIZATIONS AND ASSOCIATIONS FOR EDUCATORS

## EDUCATION

### ADMINISTRATION AND COUNSELLING

A.E.N. GRADING SYSTEM . . . . .	ED-1
ADIVSOR'S AID . . . . .	ED-1
ADMINISTRATIVE SOFTWARE . . . . .	ED-1
ASSISTANT PRINCIPAL . . . . .	ED-1
ATTENDANCE . . . . .	ED-2
ATTENDANCE REPORTING SYSTEM . . . . .	ED-2
AVICULTURIST III . . . . .	ED-2
BLOCKS LESSON SAMPLER . . . . .	ED-2
BURSAR - STUDENT ACTIVITY FUND ACCOUNTING SYSTEM . . . . .	ED-2
CURRICULUM MANAGEMENT SYSTEM . . . . .	ED-3
CLASS . . . . .	ED-3
CLASS SCHEDULING PROGRAM . . . . .	ED-4
COMPETENCY EXAM PREPARATION SERIES . . . . .	ED-4
COMPETENCY MANAGER . . . . .	ED-5
COMPOSITION CORRECTING PACKAGE . . . . .	ED-5
COMPU-GRADE: TEACHER'S GRADEBOOK PROGRAMS . . . . .	ED-5
COURSE HISTORY SYSTEM . . . . .	ED-6
CURRICULUM DESCRIPTION . . . . .	ED-6
DAILY ATTENDANCE ACCOUNTING PACKAGE . . . . .	ED-7
ELECTRIC GRADEBOOK . . . . .	ED-7
EQUIP - SCHOOL EQUIPMENT INVENTORY SYSTEM . . . . .	ED-7
FIELD TRIP LIST . . . . .	ED-8
GRADEBOOK . . . . .	ED-8
GRADING SYSTEM PROGRAMS . . . . .	ED-8
GRADUATE RECORD EXAMS . . . . .	ED-9
HONOR ROLL SORT . . . . .	ED-9
PARENT REPORTING . . . . .	ED-9
PERIOD ATTENDANCE SYSTEM . . . . .	ED-9
PLACEMENT TEST FOR PAL . . . . .	ED-10
PROJECT ATTEND . . . . .	ED-10
PROJECT BASIC . . . . .	ED-11
PROJECT I.E.P. . . . .	ED-11
PROJECT TEST . . . . .	ED-12

PURCHASE - ANNUAL SCHOOL PURCHASING SYSTEM . . . . .	ED-12
REGISTRAR . . . . .	ED-13
REGISTRATION . . . . .	ED-13
SCHEDULING PACKAGE . . . . .	ED-13
SCORE: THE ACADEMIC ASSISTANT . . . . .	ED-14
SEATING CHART . . . . .	ED-14
SMALL GROUP ROSTER . . . . .	ED-14
SPECIAL REPORT TO PARENTS . . . . .	ED-14
TEACHERS' GRADEBOOK . . . . .	ED-14
THE APPLE GRADE BOOK . . . . .	ED-15
THE CURRICULUM MANAGER . . . . .	ED-15
THE GRADER . . . . .	ED-15
THE INSTRUCTOR . . . . .	ED-16
THE TEACHING MACHINE . . . . .	ED-16
THE U.S. CONSTITUTION TUTOR . . . . .	ED-17
UNICOM EDUCATIONAL MANAGEMENT SERIES . . . . .	ED-17

#### COMPUTER AIDED/ASSISTED INSTRUCTION

+ASSEMBLER TEACHER . . . . .	ED-19
ANT FARM . . . . .	ED-19
APPLE COMMUNICATOR . . . . .	ED-19
APPLE FLASH (TM) . . . . .	ED-19
APPLE SEED . . . . .	ED-19
APPLE SUPERPILOT . . . . .	ED-20
APPLE TEACHER . . . . .	ED-22
ARISTOTLE'S APPLE . . . . .	ED-22
BASIC PROGRAMMING . . . . .	ED-22
BUMBLE GAMES . . . . .	ED-22
BUMBLE PLOT . . . . .	ED-22
COMPUTER ASSISTED TELEVISION INSTRUCTION (CATI) . . . . .	ED-23
COMPUTER AWARENESS . . . . .	ED-24
COMPUTER DISCOVERY PROGRAM . . . . .	ED-24
CREATE SKILLS - INTERMEDIATE . . . . .	ED-25
E-Z PILOT . . . . .	ED-25
EARLY ELEMENTARY I . . . . .	ED-25
EARLY ELEMENTARY II . . . . .	ED-25
EDUCATION DEMO . . . . .	ED-26
EDUCATIONAL COURSEWARE FOR THE APPLE . . . . .	ED-26
EUREKA LEARNING SYSTEM . . . . .	ED-27
EXPERIENCING BASIC DUPLICATING MASTERS NO. 7412 . . . . .	ED-27
EXPERIENCING BASIC TASK CARDS NO. 7396 . . . . .	ED-27
FACTORING . . . . .	ED-27
GERTRUDE'S PUZZLES . . . . .	ED-28
GERTRUDE'S SECRETS . . . . .	ED-28
HAND/EYE COORDINATION . . . . .	ED-28
HOW TO OPERATE THE APPLE II PLUS . . . . .	ED-29
I SPEAK BASIC: A COMPUTER LITERACY PACKAGE . . . . .	ED-29
INTRODUCTION TO COMPUTERS . . . . .	ED-30
INTRODUCTION TO MICROCOMPUTERS . . . . .	ED-30
JUGGLES' RAINBOW . . . . .	ED-30
LESSON-TUTORGRAPHS . . . . .	ED-31
LOGO . . . . .	ED-31
LOGO LANGUAGE FOR THE APPLE II . . . . .	ED-33
MASTERING THE PARTS OF SPEECH . . . . .	ED-34
MICROCOMPUTER USE & SOFTWARE DESIGN No. 7884 . . . . .	ED-34
MICROCOMPUTER WORKBOOK COURSEWARE/SOFTWARE . . . . .	ED-34
OMNISCAN LASER VIDEODISC INTERFACE . . . . .	ED-35
PAL . . . . .	ED-35
PASS . . . . .	ED-36
POLY-CHOICE . . . . .	ED-37
POTPOURRI . . . . .	ED-38
PROGRAMMER . . . . .	ED-38
PROGRAMMER PLUS . . . . .	ED-38



QUESTION & ANSWER GROUP . . . . .	ED-38
RELIABILITY TEST . . . . .	ED-38
ROCKY'S BOOTS . . . . .	ED-39
SAMP . . . . .	ED-39
SCHOOL DAYS . . . . .	ED-40
SCHOOLHOUSE I . . . . .	ED-40
SCOTTS VOICE BASED LEARNING . . . . .	ED-41
SIMULATED COMPUTER . . . . .	ED-42
STUDY QUIZ FILES (SQF) . . . . .	ED-42
SUPERPILOT . . . . .	ED-42
SURFACE FOR THE APPLE II . . . . .	ED-43
SYSTEMS ANALYST . . . . .	ED-44
TEACHER CREATE SERIES . . . . .	ED-44
TEACHERS' AIDE I AND II . . . . .	ED-45
THE ADAPTABLE SKELETON . . . . .	ED-45
THE CLASSROOM MONITOR . . . . .	ED-45
THE ELECTRONIC TOOL . . . . .	ED-46
THE GAME SHOW . . . . .	ED-46
THE GHOSTWRITER AUTHORIZING SYSTEM . . . . .	ED-47
THE LEARNING BOX . . . . .	ED-47
THE LEARNING SYSTEM . . . . .	ED-48
THE MICROCOMPUTER AS A TEACHER TOOL . . . . .	ED-48
THE NEW STEP BY STEP . . . . .	ED-48
THE PROFESSIONAL INFORMATION MANAGER . . . . .	ED-49
THE PROFESSOR . . . . .	ED-49
THE TERRAPIN TURTLE . . . . .	ED-49
THE TEST WRITER . . . . .	ED-50
TYPING TEACHER . . . . .	ED-51
VOTER 30 . . . . .	ED-51
WILL 'O THE WISP . . . . .	ED-51
Z.E.S. SYSTEM OF COMPUTER AIDED INSTRUCTION . . . . .	ED-51

#### ENGLISH/GRAMMAR

A2-ED1 WHOLE BRAIN SPELLING . . . . .	ED-53
ABC . . . . .	ED-53
ADVERBS . . . . .	ED-53
ALEXANDER THE GREAT . . . . .	ED-53
ALPHABETIZE . . . . .	ED-53
ALPHABETTA . . . . .	ED-54
ANAGRAMS I (RECREATIONAL 1) . . . . .	ED-54
BASIC READING SKILLS . . . . .	ED-54
CODE BREAKER . . . . .	ED-55
COLOR GUESS . . . . .	ED-55
COMMAS . . . . .	ED-55
COMPREHENSION POWER PROGRAM . . . . .	ED-56
CONJUNCTIONS . . . . .	ED-56
CRITICAL READING . . . . .	ED-56
EARLY WORDS . . . . .	ED-57
ENGLISH AS A SECOND LANGUAGE . . . . .	ED-58
ENGLISH GRAMMAR . . . . .	ED-58
FACT FUN . . . . .	ED-58
FRY READABILITY PROGRAM . . . . .	ED-58
GAME OF HARD/SOFT CONSONANTS . . . . .	ED-58
GAME OF SYNONYMS AND ANTONYMS . . . . .	ED-58
GAME POWER FOR PHONICS . . . . .	ED-58
GRAMMAR PROBLEMS FOR PRACTICE - HOMONYMS . . . . .	ED-59
GRAMMAR PROBLEMS FOR PRACTICE - MODIFIERS . . . . .	ED-59
GRAMMAR PROBLEMS FOR PRACTICE - PRONOUNS . . . . .	ED-59
GRAMMAR PROBLEMS FOR PRACTICE - SPELLING . . . . .	ED-60
GRAMMAR PROBLEMS FOR PRACTICE - VERBS . . . . .	ED-60
HOMONYMS . . . . .	ED-60
JABBERWOCKY . . . . .	ED-60
LANGUAGE READING DEVELOPMENT . . . . .	ED-60

MAGIC SPELLS . . . . .	ED-61
MONTY (TM) PLAYS SCRABBLE . . . . .	ED-61
MYSTERY WORD . . . . .	ED-61
NOUNS . . . . .	ED-62
OPPOSITES . . . . .	ED-62
PHRASES AND CLAUSES . . . . .	ED-62
POETRY . . . . .	ED-62
PREPOSITIONS . . . . .	ED-62
PRONOUNS . . . . .	ED-63
PUNCTUATION SKILLS: COMMAS NO. 7879 . . . . .	ED-64
PUNCTUATION SKILLS: END MARKS, SEMICOLON, COLON NO. 7880 . . . . .	ED-65
QUESTIONS & STORY . . . . .	ED-65
READING COMPREHENSION - LEVEL D (READING LEVEL 4) . . . . .	ED-66
READING LEVEL . . . . .	ED-66
READINGS IN LITERATURE . . . . .	ED-67
ROOTS/AFFIXES . . . . .	ED-67
SENTENCE DIAGRAMMING . . . . .	ED-68
SPEED READER . . . . .	ED-68
SPELLING BEE . . . . .	ED-68
SPELLING BEE WITH READING PRIMER . . . . .	ED-68
SPELLING I . . . . .	ED-69
SPELLING II . . . . .	ED-69
STORY TIME AND DON'T FALL . . . . .	ED-69
STUDENT WORD STUDY . . . . .	ED-70
SUPER SPELLER . . . . .	ED-70
SYLLABICATION . . . . .	ED-70
SYLLABICATION TUTORIAL . . . . .	ED-70
SYLLABLE COUNT . . . . .	ED-70
TESTING SERIES . . . . .	ED-70
THE ANSWER FILE . . . . .	ED-71
THE ENGLISH SAT 1 . . . . .	ED-71
THE MICRO-EDUCATIONAL TEACHING SYSTEM I . . . . .	ED-71
THE VOCABULARY GAME . . . . .	ED-72
TRUE OR FALSE SYLLABICATIONS . . . . .	ED-72
U-SPELL . . . . .	ED-72
VERB USAGE 1 & 2 . . . . .	ED-73
VERBS I . . . . .	ED-73
VERBS II . . . . .	ED-73
VERBS III . . . . .	ED-74
VOCAB . . . . .	ED-74
VOCABULARY QUIZ . . . . .	ED-74
VOCABULARY SKILLS: PREFIXES, SUFFIXES, ROOT WORDS NO. . . . .	ED-76
VOCABULARY SKILLS: CONTEXT CLUES NO. 7881 . . . . .	ED-77
VOWEL EXERCISE . . . . .	ED-77
WORD ANALOGY . . . . .	ED-77
WORD BREAK UP . . . . .	ED-77
WORD GAMES . . . . .	ED-77
WORD PREP (BASIC) - VOCABULARY DRILL . . . . .	ED-78
WORD PREP-ADVANCED . . . . .	ED-78
WORD RECOGNITION BUILDER . . . . .	ED-78
WORD SKILLS 1: PREFIXES . . . . .	ED-78
WORD STRUCTURE . . . . .	ED-79
WORD-A-TACH . . . . .	ED-79
WORDSKILL FOR THE MICROCOMPUTER - GRADES 7-ADULT . . . . .	ED-80
WORDY . . . . .	

## FOREIGN LANGUAGES

ALICIA- A BILINGUAL READER . . . . .	ED-81
ASTRO WORD SEARCH: FRENCH . . . . .	ED-81
CHINESE LESSONS . . . . .	ED-81
FOREIGN LANGUAGE VOCABULARY DRILL . . . . .	ED-81
FOREIGN/ENGLISH . . . . .	ED-81
GERMAN VOCABULARY DRILL . . . . .	

HEBREW II . . . . .	ED-82
HEBREW II PLUS . . . . .	ED-82
LANGUAGE SKILLS . . . . .	ED-82
MALUM II...IMPERIAL ROMAN PROGRAMMABLE COMPUTER . . . . .	ED-82
MICRO-DEUTSCH . . . . .	ED-82
THE LINGUIST . . . . .	ED-82
VOCABULARY PROMPTER . . . . .	ED-83

## GRAPHICS

VIDEO LOOM II . . . . .	ED-85
APPILOT II EDU-DISK . . . . .	ED-86
E-Z-GRAF . . . . .	ED-86
TURTLE . . . . .	ED-86

## LIBRARY SCIENCE

LEARNING ABOUT CATALOG CARDS . . . . .	ED-87
LEARNING TO LOCATE BOOKS ON THE SHELF . . . . .	ED-87
LEARNING TO UNDERSTAND THE CARD CATALOG . . . . .	ED-87
LEARNING TO UNDERSTAND THE TITLE PAGE . . . . .	ED-87
LEARNING TO USE AN INDEX . . . . .	ED-87
LEARNING TO USE THE TABLE OF CONTENTS . . . . .	ED-87
LIBRARY SKILLS . . . . .	ED-88
OVERDUE BOOKS PROGRAM . . . . .	ED-88
THE LIBRARIAN (VERSION 2) . . . . .	ED-88

## MATHEMATICS

A COMPUTER LABORATORY MANUAL FOR NUMBER THEORY . . . . .	ED-90
ADDITION AND SUBTRACTION . . . . .	ED-90
ALGEBRA DRILL AND PRACTICE . . . . .	ED-90
ALIEN ADDITION . . . . .	ED-91
ALLIGATOR MIX . . . . .	ED-92
ANALOGIES . . . . .	ED-92
ARCADEMIC SKILL BUILDERS . . . . .	ED-92
AREA UNDER A CURVE . . . . .	ED-92
ARITHMETIC OF FUNCTIONS . . . . .	ED-93
BASIC MATH SKILL GAMES . . . . .	ED-93
BASIC MATH SYSTEM H . . . . .	ED-93
BINOMIAL MULTIPLICATION . . . . .	ED-94
CHECKS AND BALANCES . . . . .	ED-94
COMPU-MATH I . . . . .	ED-94
COMPUTER GRAPHING EXPERIMENTS- VOLUME 1 . . . . .	ED-94
COMPUTER GRAPHING EXPERIMENTS- VOLUME 2 . . . . .	ED-95
COMPUTER GRAPHING EXPERIMENTS- VOLUME 3 . . . . .	ED-95
COMPUTER MATH GAMES, VOLUME 1 . . . . .	ED-95
COMPUTER MATH GAMES, VOLUME 2 . . . . .	ED-95
COMPUTER MATH GAMES, VOLUME 3 . . . . .	ED-95
COMPUTER MATH GAMES, VOLUME 4 . . . . .	ED-96
COMPUTER MATH GAMES, VOLUME 5 . . . . .	ED-96
CONTROL SYSTEM DESIGNER . . . . .	ED-96
COUNT AND ADD (GRADES K-2) . . . . .	ED-97
COUNTING BEE . . . . .	ED-97
DECIMAL SKILLS NO. 7878 . . . . .	ED-97
DECIMALS & PERCENTS . . . . .	ED-98
DEMOLITION DIVISION . . . . .	ED-98
DIPT - DELUSIONS, ILLUSIONS, PUZZLES & TRICKS . . . . .	ED-98
DIVISION FACTS . . . . .	ED-99
DIVISION SKILLS NO. 7883 . . . . .	ED-99
DRAGON MIX . . . . .	ED-99
ECCENTRICITY FORM OF A CONIC . . . . .	ED-100
ELEMENTARY MATH EDU-DISK . . . . .	ED-100
ELEMENTARY MATH PACKAGE 1 . . . . .	ED-100



ELEMENTARY MATH PACKAGE II . . . . .	ED-101
ELEMENTARY NUMERICAL TECHNIQUES FOR ORDINARY DIFFERENTIAL . . .	ED-101
ESSENTIAL MATHEMATICS! . . . . .	ED-101
EXPANDED NOTATION . . . . .	ED-102
EXPLORATORY DATA ANALYSIS . . . . .	ED-102
FACT SHEETS . . . . .	ED-103
FACTORING WHOLE NUMBERS . . . . .	ED-104
FRAC-DEC-PERCENT . . . . .	ED-104
FRACTION RECOGNITION . . . . .	ED-104
FRACTIONS . . . . .	ED-104
FRACTIONS . . . . .	ED-105
GOING TOGETHER - SCATTERPLOTS & CORRELATION COEFFICIENTS . . .	ED-105
GUESS THE NUMBER . . . . .	ED-105
GUESS THE RULE . . . . .	ED-106
INTERMEDIATE MULTIPLICATION AND DIVISION . . . . .	ED-106
INVADER ROUND UP . . . . .	ED-106
JUNIOR HIGH MATH DISK . . . . .	ED-106
LAZER CHASER . . . . .	ED-107
LIMITS OF SEQUENCES . . . . .	ED-107
MAT MAN . . . . .	ED-108
MATCHING AND USING NUMBERS . . . . .	ED-108
MATCHING GEOMETRIC FIGURES . . . . .	ED-108
MATH FACTS GAMES-1 . . . . .	ED-109
MATH I . . . . .	ED-109
MATH II . . . . .	ED-109
MATH SOFTWARE . . . . .	ED-109
MATH STRATEGY . . . . .	ED-109
MATH WORD PROBLEMS . . . . .	ED-110
MATHEMATICS . . . . .	ED-111
MATHEMATICS PACKAGE Grades 1 to 8 . . . . .	ED-112
MATHEMATICS SERIES . . . . .	ED-112
MATHGRID . . . . .	ED-113
MEASUREMENT I . . . . .	ED-113
METEOR MULTIPLICATION . . . . .	ED-113
MIDPOINT RULE AND TRAPEZOIDAL RULE . . . . .	ED-113
MINUS MISSION . . . . .	ED-114
MIXED NUMBER RECOGNITION . . . . .	ED-114
MIXED NUMBERS NO. 7877 . . . . .	ED-114
MONEY . . . . .	ED-115
MONEY! MONEY! . . . . .	ED-115
MULT FACTS . . . . .	ED-115
MULTIPLICATION & DIVISION FUN . . . . .	ED-115
MULTIPLICATION AND DIVISION . . . . .	ED-116
MULTIPLICATION FACTS DIAGNOSTIC . . . . .	ED-116
MYSTERY FUNCTION . . . . .	ED-116
NUMBER LINE . . . . .	ED-116
ON THE AVERAGE - MEASURES OF CENTRAL TENDENCY . . . . .	ED-117
PERCENT PROBLEMS . . . . .	ED-117
PLOT . . . . .	ED-117
PLOTTING GRAPHS FOR LINE PRINTER . . . . .	ED-117
PLOTTING GRAPHS FOR VIDEO DISPLAY . . . . .	ED-118
POLY MAN . . . . .	ED-118
PRIMARY MATH WORKSHEET . . . . .	ED-118
PROBLEM SOLVING . . . . .	ED-118
PROBLEM SOLVING IN EVERYDAY MATH . . . . .	ED-118
PROOFS & PROPERTIES . . . . .	ED-119
PYTHAGORAS AND THE DRAGON . . . . .	ED-119
PYTHAGOREAN PROOFS - PROPOSITION 47, BOOK I, EUCLID . . . . .	ED-119
RATIONAL FUNCTION GRAPHER . . . . .	ED-120
REVERSE . . . . .	ED-120
SETS . . . . .	ED-120
SIMPLE MULTIPLICATION AND DIVISION . . . . .	ED-120
SOCCER MATH . . . . .	ED-120
SOLIDS OF REVOLUTION . . . . .	ED-121

SPACE MOUSE . . . . .	ED-121
SPACE SCANNER . . . . .	ED-121
SPEED DRILL . . . . .	ED-121
STAT POWER . . . . .	ED-122
SURFACES FOR MULTIVARIABLE CALCULUS . . . . .	ED-122
TAYLOR'S SERIES APPROXIMATIONS . . . . .	ED-124
TEDDY BEAR'S COUNTING FUN . . . . .	ED-124
THE BIG MATH ATTACK . . . . .	ED-125
THE REAL NUMBER SYSTEM . . . . .	ED-125
THE RIEMANN INTEGRAL - FINDING THE AREA UNDER A CURVE . . . . .	FD-125
THE STORE THAT TEACHES . . . . .	ED-125
USING A CALENDAR . . . . .	ED-126
VECTOR SUM . . . . .	ED-126
WHOLE NUMBERS . . . . .	ED-126

## MISCELLANEOUS

32 BASIC PROGRAMS . . . . .	ED-127
A MEMORY MYTH . . . . .	ED-127
ADVERTISING TECHNIQUES . . . . .	ED-127
AROUND THE BALL PARK . . . . .	ED-127
ASTRO QUOTEC . . . . .	ED-127
AUTO ATLAS . . . . .	ED-128
BEAT THE CLOCK . . . . .	ED-128
BIOBITS I: LIFE . . . . .	ED-128
CAI MANAGER . . . . .	ED-129
CROSSWORD MAGIC . . . . .	ED-129
DISK PAK I . . . . .	ED-130
EDUCATORS DISK SPECIAL . . . . .	ED-130
GRAPPLING . . . . .	ED-131
ICAN . . . . .	ED-131
MATH STRATEGY AND SPELLING STRATEGY . . . . .	ED-131
MIND-MEMORY IMPROVEMENT COURSE-STEP 1 . . . . .	ED-132
MIND-MEMORY IMPROVEMENT COURSE-STEP 2 . . . . .	ED-132
MOPTOWN . . . . .	ED-132
NOVELTIES . . . . .	ED-132
PUZZLER . . . . .	ED-132
QUICK & EASY DATA MASTER . . . . .	ED-132
QUIZ MASTER - MOVIE TRIVIA & COMPUTER TERMINOLOGY . . . . .	ED-133
SCIENTIFIC & GAMES . . . . .	ED-134
SUBJECT DATA TAPES/FILES . . . . .	ED-134
THE MOSTLY BASIC EDUCATIONAL PROGRAM PACKAGE . . . . .	FD-134
THE RESPONSIBILITY LIFE DYNAMIC . . . . .	ED-135
THE SHELL GAMES . . . . .	ED-135

## MUSIC

ARNOLD . . . . .	ED-137
AUTO DIGISONG PLAYER . . . . .	ED-137
BASIC EAR- TRAINING SKILLS . . . . .	ED-137
CHORD MANIA . . . . .	ED-137
DOREMI . . . . .	ED-137
ENVELOPE CONSTRUCTION . . . . .	ED-137
ENVELOPE SHARPER . . . . .	ED-138
EXPERIMENTER'S PACKAGE . . . . .	ED-138
FIND THE KEY . . . . .	ED-138
HARMONY DRILLS: SET 1 . . . . .	ED-138
INTERVAL MANIA . . . . .	ED-138
KEY SIGNATURE DRILLS . . . . .	ED-138
MAKE A TUNE . . . . .	ED-139
MARCHING BAND DATABASE . . . . .	ED-139
MELODIOUS DICTATOR . . . . .	FD-139
MICRO MUSIC DIGISONG PAKS . . . . .	FD-139
MODE DRILLS . . . . .	FD-139

MUSIC COMPOSER . . . . .	ED-139
MUSIC IN THEORY AND PRACTICE . . . . .	ED-140
MUSICAL STAFF DRILL . . . . .	ED-140
MUSICMASTER . . . . .	ED-140
MUSICTUTOR . . . . .	ED-142
NOTES . . . . .	ED-142
PIANO KEYBOARD DRILL . . . . .	ED-142
PITCH DRILLS WITH ACCIDENTALS . . . . .	ED-143
PITCH DRILLS WITHOUT ACCIDENTALS . . . . .	ED-143
PROCESS & OTHER PROGRAMS . . . . .	ED-143
RHYTHMIC DICTATOR . . . . .	ED-143
SIR WILLIAM WRONG NOTE . . . . .	ED-143

## SCIENCE

ADVANCED PHYSICS . . . . .	ED-144
ALMANAC . . . . .	ED-144
ANATOMY QUIZ . . . . .	ED-144
ASTRONOMY . . . . .	ED-144
ASTRONOMY 1- INTRODUCTION TO STARS . . . . .	ED-145
AVICULTURIST I . . . . .	ED-145
AVICULTURIST II . . . . .	ED-145
AVICULTURIST IV . . . . .	ED-145
AVICULTURIST: LIQUID & GAS FLOW CALCULATION . . . . .	ED-145
BALANCING MOLECULES . . . . .	ED-146
BASIC ELECTRICITY . . . . .	ED-146
BIOBITS II: MAGIC . . . . .	ED-146
BIOBITS III: GROWTH . . . . .	ED-146
BIOBITS IV: INTERACTIONS . . . . .	ED-147
BIOBITS V: PROFILE . . . . .	ED-148
BIOBITS VI: EVOLUTION . . . . .	ED-148
BIOBITS VII: NUCLEIC ACID CONNECTION . . . . .	ED-149
BIOLOGY . . . . .	ED-150
CELM . . . . .	ED-150
CHEM LAB SIMULATIONS 3: CALORIMETRY . . . . .	ED-150
CHEM LAB SIMULATIONS 4: THERMODYNAMICS . . . . .	ED-151
CHEMICAL SYMBOLS . . . . .	ED-151
CHEMISTRY . . . . .	ED-151
CHEMISTRY II DISK . . . . .	ED-152
COMMUNICATIONS . . . . .	ED-152
COMPTROL LINEAR ACCELERATION . . . . .	ED-152
COMPTROL PACKAGE . . . . .	ED-153
COMPTROL PENDULUM . . . . .	ED-153
DENSITY LAB . . . . .	ED-153
DESCRIPTIVE STATISTICS . . . . .	ED-153
EDUCATIONAL PROGRAMS . . . . .	ED-154
EDUTECH SAMPLER . . . . .	ED-154
ELECTRIC FIELD . . . . .	ED-155
ELEMENTS & SYMBOLS . . . . .	ED-155
FUNDAMENTAL SKILLS FOR GENERAL CHEMISTRY . . . . .	ED-155
GAS LAWS . . . . .	ED-155
GEOMETRICAL OPTICS . . . . .	ED-156
GRAPHS . . . . .	ED-156
HARMONIC MOTION WORKSHOP . . . . .	ED-156
INSECTS . . . . .	ED-156
INTERP-WAVE SUPERPOSITION . . . . .	ED-156
INTRODUCTION TO ORGANIC CHEMISTRY . . . . .	ED-157
INTRODUCTORY MECHANICS FOR THE APPLE II . . . . .	ED-158
INTROSTAT . . . . .	ED-159
LAB PLOT . . . . .	ED-159
LIVING THINGS . . . . .	ED-160
MECHANICS . . . . .	ED-160
MECHANICS AND MOTION . . . . .	ED-160
MENDELIAN GENETICS ("GENIE") . . . . .	ED-160



METRI-VERT . . . . .	ED-161
MILLIKAN . . . . .	ED-161
NEWTON - SATELLITE ORBITS . . . . .	ED-161
NONCONSTANT ACCELERATION . . . . .	ED-162
OPTICS, WAVE MOTION, AND ELECTRICITY . . . . .	ED-162
ORBITING AND ROTATING FIGURES . . . . .	ED-162
ORDERIDENT . . . . .	ED-162
ORGANIC CHEMISTRY . . . . .	ED-163
ORGANIC NOMENCLATURE . . . . .	ED-163
OUR BODIES . . . . .	ED-163
PARABOLIC MOTION . . . . .	ED-164
PHMETER/SPECTRO/WHEATSTONE . . . . .	ED-164
PHYSICS . . . . .	ED-164
PHYSICS - FREE FALL . . . . .	ED-164
PHYSICS DEMOS PACKAGE . . . . .	ED-164
PHYSICS DEMOS SET . . . . .	ED-165
PHYSICS I DISK . . . . .	ED-165
PHYSICS II DISK . . . . .	ED-165
PLANETARY MOTION . . . . .	ED-166
QUAL . . . . .	ED-167
QUALITATIVE ORGANIC ANALYSIS . . . . .	ED-167
QUANTUM ATOM AND SINE WAVES . . . . .	ED-167
SATELLITE TRACKING SOFTWARE . . . . .	ED-167
SCATTER - PARTICLES SCATTERING . . . . .	ED-168
SCIENCE . . . . .	ED-168
SCIENCE LAB DATABASE . . . . .	ED-168
SCIENTIFIC MEASUREMENTS . . . . .	ED-169
SIMPLE MACHINES . . . . .	ED-169
SOUND . . . . .	ED-169
STATISTICS . . . . .	ED-170
TARGET . . . . .	ED-170
TELLING TIME . . . . .	ED-170
TELLSTAR . . . . .	ED-170
THE EARTH AND ITS COMPOSITION . . . . .	ED-171
THE MOSTLY BASIC SCIENTIFIC PROGRAM PACKAGE . . . . .	ED-171
THE PLANETARY GUIDE . . . . .	ED-172
THE SOLAR SYSTEM . . . . .	ED-172
THREE BODY ORBITS . . . . .	ED-172
TIME/RATE/DISTANCE . . . . .	ED-172
TITRATION . . . . .	ED-172
TWO POPULATIONS . . . . .	ED-173
VECTORS . . . . .	ED-173
WAVE MOTION . . . . .	ED-173
WEATHER FRONTS . . . . .	ED-173
WEATHER- A LESSON-TUTORGRAPH . . . . .	ED-173
ZEBRA FINCH GENETICS . . . . .	ED-173

## SOCIAL STUDIES

AKAN . . . . .	ED-174
AMERICAN HISTORY THROUGH BIOGRAPHIES . . . . .	ED-174
AMERICAN INDIANS . . . . .	ED-174
CAI PROGRAM VOLUME II . . . . .	ED-174
CAI PROGRAMS VOLUME I . . . . .	ED-174
COMPUTER LAB IN MEMORY AND COGNITION . . . . .	ED-174
DEMO-GRAPHICS . . . . .	ED-176
EARLY CIVILIZATION . . . . .	ED-178
ECCOLOGICAL MODELING . . . . .	ED-178
ECOLOGY SIMULATIONS 1 . . . . .	ED-179
ELECTORAL COLLEGE . . . . .	ED-180
HAIL TO THE CHIEF . . . . .	ED-180
HISTORY AND GEOGRAPHY PACKAGE . . . . .	ED-180
HOLIDAYS AND FESTIVALS . . . . .	ED-181
MEDALIST-CONTINENTS . . . . .	ED-181

MEDALIST-PRESIDENTS . . . . .	ED-181
MEDALIST-STATES . . . . .	ED-181
MEET THE PRESIDENTS . . . . .	ED-181
POPULATION . . . . .	ED-182
PRESIDENT ELECT . . . . .	ED-182
SEX ROLE . . . . .	ED-182
SHORE FEATURES- A LESSON-TUTORGRAPH . . . . .	ED-182
SOCIAL AND ECONOMIC SIMULATIONS . . . . .	ED-182
SOCIAL STUDIES . . . . .	ED-183
STATES OF THE UNITED STATES . . . . .	ED-183
THE ALIVENESS LIFE DYNAMIC . . . . .	ED-183
THE CONDITIONING LIFE DYNAMIC . . . . .	ED-183
THE ENVIRONMENT LIFE DYNAMIC . . . . .	ED-183
THE LIFE DYNAMIC TRANSFORMATION EXPERIENCE . . . . .	ED-184
THE MIDDLE AGES . . . . .	ED-184
THE RELATIONSHIP LIFE DYNAMIC . . . . .	ED-184
TRANSPORTATION . . . . .	ED-184
TRUCKER AND STREETS OF THE CITY . . . . .	ED-184
WORLD AND STATE CAPITALS . . . . .	ED-185
WORLD CLOCK . . . . .	ED-185
WORLD POLAR/DESERT REGIONS . . . . .	ED-185

## ENGINEERING

APPLEPIPS . . . . .	EN-1
BEAMS . . . . .	EN-1
CADAPPLE . . . . .	EN-1
CHIP . . . . .	EN-1
CIRCUIT ANALYSIS . . . . .	EN-2
CIRCUIT DESIGNER AND SIMULATOR . . . . .	EN-2
CONBEAM . . . . .	EN-3
COORDINATE GEOMETRY . . . . .	EN-3
DATA MANAGER FOR WEATHER OBSERVATIONS . . . . .	EN-4
DESIGNER'S TOOLKIT . . . . .	EN-4
DIF FILE CONVERTER . . . . .	EN-4
DWGLIST . . . . .	EN-4
ELECTRIC "BREADBOARD" . . . . .	EN-5
ELECTRICAL ENGINEERING II . . . . .	EN-5
ELECTRICAL ENGINEERING SERIES . . . . .	EN-5
ELECTRONIC DESIGN FOR THE APPLE . . . . .	EN-6
ELECTRONICS 1 . . . . .	EN-7
ELECTRONICS 2 . . . . .	EN-8
ELECTRONICS 3 . . . . .	EN-8
ENERGY AND ENVIRONMENT . . . . .	EN-8
ENGINEERING APPLICATIONS OF COMPUTER GRAPHICS . . . . .	EN-8
ENGINEERING MATHEMATICS-1 . . . . .	EN-8
FIELD NOTE DATA REDUCTION . . . . .	EN-9
FORECASTING GROUP . . . . .	EN-9
FOURIER ANALYZER . . . . .	EN-9
FRAME ANALYSIS ON MICROCOMPUTERS . . . . .	EN-10
GRADE BEAM ON ELASTIC FOUNDATION ANALYSIS . . . . .	EN-10
GROUP VELOCITY DEMONSTRATIONS . . . . .	EN-10
HORIZONTAL CURVE STAKING . . . . .	EN-10
HURRICANE TRACKING PROGRAM . . . . .	EN-10
HYGROMETER PROGRAM . . . . .	EN-11
ISOLATED FOOTING DESIGN . . . . .	EN-11
LOGIC SIMULATOR . . . . .	EN-11
MCAP: A MICROCOMPUTER CIRCUIT ANALYSIS PROGRAM . . . . .	EN-11
MENTOR (ELECTRONIC DESIGN FOR THE APPLE) . . . . .	EN-11
MICROCOMPUTER AIDED DESIGN OF ACTIVE FILTERS . . . . .	EN-13
MICROCOMPUTER CIRCUIT ANALYSIS . . . . .	EN-14
MISCELLANEOUS IE APPLICATIONS GROUP . . . . .	EN-14
MODEM PROGRAM . . . . .	EN-14
MOMENT OF INERTIA & ELEMENT OF TRIANGLE . . . . .	EN-15

OP-AMP DESIGN . . . . .	EN-15
OPERATIONS RESEARCH MODELS GROUP . . . . .	EN-15
PIER AND GRADE BEAM DESIGN . . . . .	EN-16
PLANT LAYOUT GROUP . . . . .	EN-16
POLE EMBEDMENT DESIGN . . . . .	EN-16
PRODUCTION CONTROL GROUP . . . . .	EN-16
QUALITY CONTROL AND RELIABILITY ANALYSIS GROUP . . . . .	EN-17
RETAINING WALL DESIGN . . . . .	EN-17
SCIENCE AND ENGINEERING PROGRAMS . . . . .	EN-17
SOLAR ENERGY FOR THE HOME . . . . .	EN-18
SOLGAIN . . . . .	EN-18
SPECSYSTEM . . . . .	EN-18
SPUR GEARS . . . . .	EN-20
STADIA REDUCTION . . . . .	EN-20
STATICS ON MICROCOMPUTERS . . . . .	EN-20
STRESS & STRAIN ON MICROCOMPUTERS . . . . .	EN-20
SUNHEAT 1 . . . . .	EN-21
SUNOP . . . . .	EN-21
SUNPAS . . . . .	EN-22
SUNSIM-2 . . . . .	EN-22
SUNSIM-3 . . . . .	EN-22
SUNSIM-4 . . . . .	EN-22
SURVEYOR'S AIDE . . . . .	EN-23
T-SQUARE . . . . .	EN-23
TEK-PAK . . . . .	EN-23
TEMPERATURE CONTROL PROGRAM . . . . .	EN-23
TEMPSENSE TEMPERATURE MONITORING SYSTEM . . . . .	EN-23
TFA (TRANSFER FUNCTION ANALYZER) . . . . .	EN-25
THREE MILE ISLAND SPECIAL EDITION . . . . .	EN-25
TOPOGRAPHIC . . . . .	EN-26
TSWING . . . . .	EN-27
UNI-SOLVE . . . . .	EN-27
WIND ENERGY CALCULATIONS . . . . .	EN-27
WOOD HEAT-1 . . . . .	EN-27
WORK MEASUREMENT GROUP . . . . .	EN-27

## GAMES INTRODUCTION

### GAMES

#### ADVENTURE

#1 ADVENTURELAND . . . . .	G-1
3 ADVENTURES . . . . .	G-1
ADAMS' ODYSSEY . . . . .	G-1
ADVENTURE . . . . .	G-1
AKALABETH . . . . .	G-1
CHAMBERS OF XENOBIA . . . . .	G-2
CLASSIC ADVENTURE . . . . .	G-2
CLOAK & DAGGER . . . . .	G-2
CYBORG . . . . .	G-2
DRAGON FIRE . . . . .	G-2
DUNGEON CAMPAIGN ADVENTURE . . . . .	G-3
EMPIRE OF THE OVERMIND . . . . .	G-3
ESCAPE . . . . .	G-3
ESCAPE FROM RUNGISTAN . . . . .	G-4
GOBLINS . . . . .	G-4
HI-RES ADVENTURE #1: MISSION ASTEROID . . . . .	G-4
KABUL SPY . . . . .	G-4
KNIGHT OF DIAMONDS . . . . .	G-5
LABYRINTH . . . . .	G-5
LORD OF KARMA . . . . .	G-5
MINOTAUR . . . . .	G-5
MISSION IMPOSSIBLE ADVENTURE . . . . .	G-5



MORLOC'S TOWER . . . . .	G-6
MYSTERY HOUSE . . . . .	G-6
NORTH ATLANTIC CONVOY RAIDER . . . . .	G-6
ODYSSEY IN TIME . . . . .	G-6
OLDORF'S REVENGE . . . . .	G-7
PYRAMID OF DOOM . . . . .	G-7
QUEEN OF PHOBOS . . . . .	G-7
QUEST FOR ATLANTIS . . . . .	G-7
RACE FOR MIDNIGHT . . . . .	G-7
RESCUE AT RIGEL . . . . .	G-7
SAVAGE ISLAND PART I . . . . .	G-8
SAVAGE ISLAND PART II . . . . .	G-8
SHERWOOD FOREST . . . . .	G-8
SORCERER OF SIVA . . . . .	G-8
SPACE II . . . . .	G-9
SPECIAL SAMPLER . . . . .	G-9
STRANGE ODYSSEY . . . . .	G-9
SWORD OF ZEDEK . . . . .	G-9
TARTURIAN . . . . .	G-9
TEMPLE OF APSHAI . . . . .	G-9
THE CURSE OF CROWLEY MANOR . . . . .	G-10
THE DATESTONES OF RYN . . . . .	G-10
THE KEYS OF ACHERON . . . . .	G-10
THE MYSTIC ORACLE . . . . .	G-10
THE STONE OF SISYPHUS . . . . .	G-11
THE WIZARD . . . . .	G-11
THE WONDERFUL WORLD OF EAMON . . . . .	G-11
TIME TRAVELER . . . . .	G-11
TIME ZONE . . . . .	G-12
UPPER REACHES OF APSHAI . . . . .	G-12
VOODOO CASTLE THE COUNT AND GHOST TOWN . . . . .	G-12
VOYAGE OF THE VALKYRIE . . . . .	G-12
WILDERNESS CAMPAIGN . . . . .	G-12
WIZARDRY . . . . .	G-13
WIZARDRY: PROVING GROUNDS OF THE MAD OVERLORD . . . . .	G-13

#### ARCADE GAMES

'SUPER' STARBASE GUNNER . . . . .	G-14
"LEARNING-FUN" DUO (TM) . . . . .	G-14
5 GREAT GAMES . . . . .	G-14
5 MORE GREAT GAMES . . . . .	G-14
A2-3D/A SATURN NAVIGATOR . . . . .	G-14
A2-PB1 PINBALL . . . . .	G-15
A2-SG1 ESCAPE . . . . .	G-15
ABM . . . . .	G-15
AIRSEA BATTLE . . . . .	G-15
ALIEN LANDER . . . . .	G-15
ALIEN RAIN . . . . .	G-15
APOLLO ASCENT . . . . .	G-16
APOLLO LANDER . . . . .	G-16
APPLE BOWL . . . . .	G-16
APPLE FUN . . . . .	G-16
APPLE GALAXIAN . . . . .	G-16
APPLE PANIC! . . . . .	G-16
APPLE POT POURRI . . . . .	G-16
APPLE TEK, SPACE WAR . . . . .	G-17
APPOINTMENT AT ALDEBARAN . . . . .	G-17
AUTOBAHN . . . . .	G-17
B-1 NUCLEAR BOMBER . . . . .	G-17
BATTER UP!!/A MICROBASEBALL GAME . . . . .	G-18
BEZ-ZERK . . . . .	G-18
BILL BUDGE'S SPACE ALBUM . . . . .	G-18
BILL BUDGE'S TRILOGY OF GAMES . . . . .	G-18

BLOCKADE . . . . .	G-18
BLOODY MURDER . . . . .	G-19
BORG . . . . .	G-19
BOTH BARRELS . . . . .	G-19
BUG ATTACK . . . . .	G-19
BUSTOUT . . . . .	G-20
CANNONBALL BLITZ . . . . .	G-20
COMPUTER FOOSBALL . . . . .	G-20
CONFLICT 2500 . . . . .	G-20
CONGO . . . . .	G-20
CROSSFIRE . . . . .	G-21
CYBER STRIKE . . . . .	G-21
CYCLOD . . . . .	G-21
DAVID'S MIDNIGHT MAGIC . . . . .	G-21
DEATHMAZE 5000 . . . . .	G-21
DOGFIGHT . . . . .	G-22
EPOCH . . . . .	G-22
ESCAPE FROM ARCTURUS . . . . .	G-22
FIREBUG . . . . .	G-22
FRAZZLE! . . . . .	G-23
FREE FALL . . . . .	G-23
GALAXY GATES . . . . .	G-23
GALAXY WARS . . . . .	G-24
GAME PACK #1 . . . . .	G-24
GAME PACK #2 . . . . .	G-24
GAME PLAYING WITH BASIC I . . . . .	G-24
GAMMA GOBLINS . . . . .	G-24
GENETIC DRIFT . . . . .	G-24
GOLDEN MOUNTAIN . . . . .	G-25
GOLDEN VOYAGE . . . . .	G-25
HADRON . . . . .	G-25
HEAD ON . . . . .	G-25
HOWITZER . . . . .	G-25
HYPER HEAD ON . . . . .	G-26
INVADERS . . . . .	G-26
INVASION OF PHOBOS . . . . .	G-26
JELLYFISH . . . . .	G-26
LE MANS . . . . .	G-26
LEM LANDER . . . . .	G-27
MICROWAVE . . . . .	G-27
MISSILE ATTACK . . . . .	G-27
MOUSKATTACK . . . . .	G-27
NIGHTMARE GALLERY . . . . .	G-28
ODYSSEY: THE COMPLETE APVENTURE . . . . .	G-28
ORBITRON . . . . .	G-28
OUTDOOR GAMES . . . . .	G-28
PEGASUS II . . . . .	G-29
PHANTOMS FIVE . . . . .	G-29
PLANETOIDS . . . . .	G-29
POOL 1.5 . . . . .	G-29
PROCYON WARRIOR . . . . .	G-29
PULSAR II . . . . .	G-29
RACER . . . . .	G-30
REAR GUARD . . . . .	G-30
REAR GUARD . . . . .	G-30
RED ALERT . . . . .	G-31
RED BARON . . . . .	G-31
SABOTAGE . . . . .	G-31
SANTA'S SLEIGH RIDE . . . . .	G-31
SKY WATCH . . . . .	G-31
SMASHUP . . . . .	G-31
SNACK ATTACK . . . . .	G-32
SNAKE BYTE . . . . .	G-32
SNEAKERS . . . . .	G-32

SOLO RACE . . . . .	G-32
SPACE DEFENSE . . . . .	G-32
SPACE EGGS . . . . .	G-32
SPACE GAMES I . . . . .	G-33
SPACE MAZE . . . . .	G-33
SPACE QUARKS . . . . .	G-33
SPACE WAR . . . . .	G-33
SPACE WARRIOR . . . . .	G-33
STAR ATTACK . . . . .	G-34
STAR THIEF . . . . .	G-34
SUPER INVASION . . . . .	G-34
TANK ATTACK/DEATH RUN . . . . .	G-34
TANK COMMAND . . . . .	G-34
THE ASTEROID FIELD . . . . .	G-34
THE BEST OF MUSE . . . . .	G-35
THE ELIMINATOR . . . . .	G-35
THIEF . . . . .	G-35
THRESHOLD . . . . .	G-35
TORAX . . . . .	G-36
TOWER OF HANOI . . . . .	G-36
TRACK ATTACK . . . . .	G-36
TRANQUILITY BASE . . . . .	G-36
TRAPSHOOT . . . . .	G-36
TRILOGY . . . . .	G-36
TSUNAMI . . . . .	G-37
TUNNEL TERROR . . . . .	G-37
TWERPS . . . . .	G-37
WILLIAM TELL . . . . .	G-38
ZERO GRAVITY PINBALL . . . . .	G-38

#### GAMBLING

A YEAR AT THE RACES . . . . .	G-39
BLACK JACK TUTORIAL . . . . .	G-39
BRIDGE 2.0 . . . . .	G-39
BRIDGE TUTOR . . . . .	G-39
COMPUBRIDGE . . . . .	G-40
CRIBBAGE . . . . .	G-40
CRIBBAGE II . . . . .	G-40
DERBY DOWNS . . . . .	G-41
GAMES PEOPLE PLAY . . . . .	G-41
HEARTS 1.5 . . . . .	G-41
HORSE RACE HANDICAPPING SYSTEM . . . . .	G-41
POKENO . . . . .	G-41
POKER SLOT MACHINE/HI-RES PLAYING CARDS . . . . .	G-41
PRO FOOTBALL . . . . .	G-42
THE GOLD EDITION . . . . .	G-42
THE RACE TRACK (NEVADA VERSION) . . . . .	G-42
THE STRIP . . . . .	G-42
THE WORLD'S GREATEST BLACKJACK PROGRAM . . . . .	G-42
TURF ANALYSIS . . . . .	G-43
WIN AT THE RACES . . . . .	G-43

#### STRATEGY

A STELLAR TREK . . . . .	G-45
A2-FS1 FLIGHT SIMULATOR . . . . .	G-45
AIR TRAFFIC CONTROLLER . . . . .	G-45
ADVENTURE TO ATLANTIS . . . . .	G-45
BASEBALL . . . . .	G-46
BOWLING/TRILOGY . . . . .	G-46
CARTELS & CUTTHROATS . . . . .	G-46
CASTLE WOLFENSTEIN . . . . .	G-46
CHECKERS . . . . .	G-46



CHESS . . . . .	G-47
CHESS CONNECTION . . . . .	G-47
COLORBLIND . . . . .	G-47
CCORMASTER . . . . .	G-47
COMMBAT . . . . .	G-47
COMPUTER ACQUIRE . . . . .	G-48
COMPUTER AIR COMBAT . . . . .	G-48
COMPUTER AMBUSH . . . . .	G-48
COMPUTER BASEBALL . . . . .	G-48
COMPUTER BISMARCK . . . . .	G-49
COMPUTER CONFLICT . . . . .	G-49
COMPUTER NAPOLEONICS . . . . .	G-49
COMPUTER QUARTERBACK . . . . .	G-49
CYTRON MASTERS . . . . .	G-50
DARK FOREST . . . . .	G-50
DOCTOR CHIPS . . . . .	G-50
DOOM CAVERN/SORCERER'S CHALLENGE . . . . .	G-50
EMPIRE 1: WORLD BUILDERS . . . . .	G-51
ENCOUNTER . . . . .	G-51
EXTRA SENSORY PERCEPTION/E.S.P. . . . .	G-51
FASTGAMMON . . . . .	G-51
FOOTBALL . . . . .	G-51
FOUR-IN-A-ROW . . . . .	G-52
GALACTIC EMPIRE . . . . .	G-52
GALACTIC REVOLUTION . . . . .	G-52
GALACTIC TRADER . . . . .	G-52
GAME PACK #3 . . . . .	G-52
GAME PACK #4 . . . . .	G-53
GENIUS . . . . .	G-53
GLOBAL WAR . . . . .	G-53
GOLF . . . . .	G-53
GREEN BERET . . . . .	G-53
GUNS OF FORT DEFIANCE . . . . .	G-54
HAUNTED HOUSE . . . . .	G-54
HI-RES COMPUTER GOLF . . . . .	G-54
HI-RES FOOTBALL . . . . .	G-54
HI-RES SOCCER . . . . .	G-54
INTERACTIVE FANTASIES . . . . .	G-54
INVASION ORION . . . . .	G-55
IV TAWALA'S LAST REDOUBT . . . . .	G-55
JABBERTALKY . . . . .	G-55
JET FIGHTER PILOT . . . . .	G-56
LOW SCORE II . . . . .	G-56
MAJOR LEAGUE BASEBALL . . . . .	G-56
MAZE GAME . . . . .	G-56
MICRO LEAGUE BASEBALL . . . . .	G-56
MICRO OTHELLO . . . . .	G-56
MIDWAY CHAMPAIGN . . . . .	G-57
MIMIC . . . . .	G-57
NAPOLEON'S CAMPAIGNS: 1813 & 1815 . . . . .	G-57
NUCLEAR REACTION . . . . .	G-57
NUKEWAR . . . . .	G-57
OIL TYCOON . . . . .	G-58
OLYMPIC DECATHLON . . . . .	G-58
OPERATION APOCALYPSE . . . . .	G-58
OTHELLO . . . . .	G-58
PERCEPTION PACKAGE . . . . .	G-58
PLANET MINERS . . . . .	G-59
REVERSAL . . . . .	G-59
RICOCHET . . . . .	G-59
ROBOT WAR . . . . .	G-59
S.E.U.I.S. . . . .	G-59
SAHARA WARRIORS . . . . .	G-60
SANTA PARAVIA AND FIUMACCIO . . . . .	G-60

SARGON II - CHESS . . . . .	G-60
SAUCER INVASION . . . . .	G-60
SHADOW HAWK ONE . . . . .	G-61
SKYBOMBERS II . . . . .	G-61
SOUTHERN COMMAND . . . . .	G-61
SPACE . . . . .	G-61
STAR WARRIOR . . . . .	G-62
STARFLEET ORION . . . . .	G-62
STOCKS AND BONDS . . . . .	G-62
TANKTICS . . . . .	G-63
TAWALA'S LAST REDOUBT . . . . .	G-63
THE BATTLE OF SHILOH . . . . .	G-63
THE COSMIC BALANCE . . . . .	G-63
THE MAD MAD MAD MAD CUBE . . . . .	G-64
THE PRISONER . . . . .	G-64
THE SHATTERED ALLIANCE . . . . .	G-64
THE WARP FACTOR . . . . .	G-64
THREE MILE ISLAND . . . . .	G-64
TIGERS IN THE SNOW . . . . .	G-65
TORPEDO FIRE . . . . .	G-65
TUESDAY MORNING QUARTERBACK . . . . .	G-65
UFO . . . . .	G-65
WAR . . . . .	G-66
WAR OF THE SAMURAI . . . . .	G-66

## GRAPHICS INTRODUCTION

### GRAPHICS

A RANDOM WALK . . . . .	GR-1
A2-3D1 GRAPHICS PACKAGE . . . . .	GR-1
A2-GE1 GRAPHICS EDITOR . . . . .	GR-1
AB-3D1 BASIC 3D GRAPHICS . . . . .	GR-1
ACCU-SHAPE . . . . .	GR-1
ADDITIONAL FONTS AND CHARACTER SETS . . . . .	GR-2
ALPHA PLOT . . . . .	GR-2
ALPHABYTES . . . . .	GR-3
ANADEx (MODEL9501) GRAPHICS SOFTWARE . . . . .	GR-3
APPLE DATA GRAPH 2.1 . . . . .	GR-4
APPLE FLASHER . . . . .	GR-4
APPLE PAINTBOX . . . . .	GR-4
APPLE WORLD . . . . .	GR-4
APPLEWRITER GRAPHICS . . . . .	GR-4
ARTIST'S DESIGNER . . . . .	GR-5
AUTO PLOT . . . . .	GR-5
BANNERS I . . . . .	GR-6
BLOCK SHAPES FOR APPLESOFT OR ASSEMBLY . . . . .	GR-6
BRIGHTERWRITER GRAPHICS SOFTWARE . . . . .	GR-6
CHARACTER GENERATOR . . . . .	GR-6
CHART MASTER . . . . .	GR-7
COMBINED ENHANCED GRAPHICS SOFTWARE . . . . .	GR-7
COMP-U-SKY . . . . .	GR-7
COMPU CUBE . . . . .	GR-8
COMPUTER PORTRAIT SUBSYSTEM . . . . .	GR-8
COPYCAT . . . . .	GR-8
CURVE COPY . . . . .	GR-9
CURVE II . . . . .	GR-9
CURVE- USA . . . . .	GR-9
DATA PLOT . . . . .	GR-10
DATA-GRAPH . . . . .	GR-10
E-Z DRAW . . . . .	GR-10
EDITRIX (TM) . . . . .	GR-11
ELECTRIC CRAYON . . . . .	GR-11
ENHANCED GRAPHICS SOFTWARE . . . . .	GR-11

EXECUTIVE BRIEFING SYSTEM . . . . .	GR-11
EXPANSION PAC-I . . . . .	GR-12
EXPANSION PAC-II . . . . .	GR-13
FONT WRITER . . . . .	GR-13
GPS - GRAPHICS PROCESSING SYSTEM . . . . .	GR-13
GRAF-PAK . . . . .	GR-14
GRAPH FIT . . . . .	GR-14
GRAPHIC SOFTWARE FOR MICROCOMPUTERS . . . . .	GR-14
GRAPHIC WRITER . . . . .	GR-14
GRAPHICS LIBRARY . . . . .	GF-15
GRAPHICS PRINTING SYSTEM . . . . .	GR-15
GRAPHTRIX 1.3 . . . . .	GR-15
HI-PLOT INTERFACE TO APPLE PLOT . . . . .	GR-15
HI-RES GRAPHIC PRINTER . . . . .	GR-16
HI-RES GRAPHICS PAD . . . . .	GR-16
HI-RES SECRETS . . . . .	GR-16
HIGHER FONTS I . . . . .	GR-17
HIGHER GRAPHICS II . . . . .	GR-17
HIGHER TEXT II . . . . .	GR-17
HISTO-GRAPH . . . . .	GR-18
INTRODUCTION TO LO-RES GRAPHICS . . . . .	GR-19
KEYBOARD . . . . .	GR-19
LETTER POST . . . . .	GR-19
LOW RESOLUTION SHAPEWRITER . . . . .	GR-20
MESSAGE TRIO . . . . .	GR-20
MICRO PAINTER . . . . .	GR-20
MICRO-PAINTER . . . . .	GR-20
MIDPOINTS AND LINES . . . . .	GR-21
NEC SPINWRITER GRAPHICS . . . . .	GR-21
OMNI PLOTTING PACKAGE . . . . .	GR-21
PADDLE GRAPHICS . . . . .	GR-21
PADDLE SHAPEMAKER . . . . .	GR-21
PARALAX . . . . .	GR-22
PASCAL ANIMATION PACKAGE . . . . .	GR-22
PASCAL ANIMATION TOOLS . . . . .	GR-23
PASCAL GRAPHICS . . . . .	GR-23
PFS: GRAPH . . . . .	GR-24
PILOT ANIMATION PACKAGE . . . . .	GR-25
PLOT II . . . . .	GR-26
PRESENTATION AID . . . . .	GF-26
PRINT O GRAPHER . . . . .	GR-26
ROGER'S EASEL . . . . .	GR-27
SCIENTIFIC PLOTTER . . . . .	GR-27
SCREEN DIRECTOR . . . . .	GR-28
SHAPE BUILDER . . . . .	GR-28
SHAPE EDITOR . . . . .	GR-28
SMART . . . . .	GR-28
SPECIAL EFFECTS . . . . .	GR-29
STATION MASTER . . . . .	CR-30
STOCKPLOT . . . . .	GR-30
STROBE PLOT . . . . .	GR-30
SUPER DRAW AND WRITE . . . . .	GR-31
SUPER PIX SOFTWARE . . . . .	GR-31
SUPER SHAPE ANIMATE . . . . .	GF-31
SUPER SHAPE DRAW . . . . .	GR-31
SUPER WEAVER . . . . .	GR-32
TABLET SHAPEMAKER . . . . .	GR-32
TABLET-GRAPHICS . . . . .	GR-32
TEKSIM THE APPLE II/TEKTRONIX 4010 SIMULATOR . . . . .	GR-33
TEXT TYPE PROGRAM . . . . .	GR-33
THE ARTIST . . . . .	GR-33
THE COLORING BOARD . . . . .	GR-34
THE COMPLETE GRAPHICS SYSTEM II . . . . .	GR-34
THE CREATIVITY LIFE DYNAMIC PACKAGE . . . . .	GR-35



THE CREATIVITY TOOL BOX . . . . .	GR-35
THE DESIGNER . . . . .	GR-35
THE FORECASTER II . . . . .	GR-36
THE GRAPHICS MAGICIAN . . . . .	GR-36
THE GRAPHICS PRINTING SYSTEM . . . . .	GR-37
THE ILLUSTRATOR . . . . .	GR-37
THE PASCAL GRAPHICS EDITOR . . . . .	GR-38
THE SCREEN MACHINE . . . . .	GR-38
THE SHAPE PACKAGE . . . . .	GR-38
THE SLIDE SHOW . . . . .	GR-38
THE SPACE TABLET, A 3-D GRAPHICS TABLET . . . . .	GR-39
THE STEREO GENERATOR . . . . .	GR-39
THE SUPERPLOTTER . . . . .	GR-40
U-DRAW II . . . . .	GR-40
ULTRA HI-RES GRAPHICS . . . . .	GR-40
ULTRA-RES . . . . .	GR-41
UNIVERSAL GRAPHICS . . . . .	GR-41
VIDEO MARQUEE . . . . .	GR-41
VIDICHART . . . . .	GR-41
VISILIST . . . . .	GR-42
VISILOT DRIVER . . . . .	GR-42
ZOOM . . . . .	GR-42
ZOOM GRAFIC . . . . .	GR-42

## HARD DISK INTRODUCTION

## HARD DISK

## CORVUS COMPATIBLE SOFTWARE

## MAILING LIST

APPLE A.I.M. . . . .	ML-1
APPLE POST . . . . .	ML-1
APPLE SACK 5- MAIL SACK . . . . .	ML-1
COMMERCIAL MAILER . . . . .	ML-1
CUSTOMER INFORMATION SYSTEM . . . . .	ML-1
DISK MAILING LIST . . . . .	ML-2
EASYMAILER . . . . .	ML-2
LABEL MAKER . . . . .	ML-2
MAGIC MAILER . . . . .	ML-2
MAIL EXPRESS . . . . .	ML-3
MAIL LIST . . . . .	ML-3
MAIL LIST PACKAGE . . . . .	ML-3
MAIL LIST SYSTEM . . . . .	ML-4
MAIL POWER . . . . .	ML-4
MAIL/PHONE LIST . . . . .	ML-4
MAILER . . . . .	ML-4
MAILING LIST . . . . .	ML-5
MAILING LIST DATABASE . . . . .	ML-5
MAILING LIST PROGRAM . . . . .	ML-6
MAILMASTER . . . . .	ML-6
MAILMASTER ZIP SORT OPTION . . . . .	ML-6
MAILROOM . . . . .	ML-6
MASTER MAILING LIST . . . . .	ML-6
MEGA-MAIL . . . . .	ML-7
MICRO GIANT MAIL LIST . . . . .	ML-7
THE ADDRESS BOOK . . . . .	ML-8
THE MAILING LABEL AND FILING SYSTEM . . . . .	ML-8
THE MAILING LABEL AND FILING SYSTEM ADJUNCT . . . . .	ML-8
THE MAILING LABEL AND FILING SYSTEM SUPPLEMENT . . . . .	ML-9
THE MAILROOM . . . . .	ML-9

## MATHEMATICS

10 LESSONS IN ALGEBRA . . . . .	M-1
3-D SURFACE PLOTTERS . . . . .	M-1
A-STAT 79 . . . . .	M-1
ADVANCED MATHEMATICAL ROUTINES . . . . .	M-2
AIDA: APPLE INTERACTIVE DATA ANALYSIS . . . . .	M-2
ANOVA . . . . .	M-3
ANOVA II . . . . .	M-3
BIOBITS VIII: ANALYTICS . . . . .	M-3
COMPLEX MATHEMATICS . . . . .	M-4
CONDUIT . . . . .	M-4
CURVE . . . . .	M-5
CURVE FITTER . . . . .	M-5
DATA SMOOTHER . . . . .	M-6
DATA SYSTEM . . . . .	M-6
DB MASTER STAT PAK . . . . .	M-6
DESCRIPTIVE STATISTICS & REGRESSION ANALYSIS . . . . .	M-7
DESK CALCULATOR II . . . . .	M-7
DOUBLE PRECISION FLOATING POINT FOR APPLESOFT (TM) . . . . .	M-7
EASI/ARIMA . . . . .	M-7
ELEMENTARY ARITHMETIC EDU-DISK . . . . .	M-8
ELF STATISTICAL PACKAGE . . . . .	M-8
EXPLORATORY DATA ANALYSIS . . . . .	M-9
FUNCTION PLOTTER . . . . .	M-10
GENERAL MATHEMATICS-1 . . . . .	M-11
HSD ANOVA . . . . .	M-11
HSD REGRESS/MULTIPLE REGRESSION PROGRAM . . . . .	M-11
HSD STATS . . . . .	M-12
INTRODUCTION TO PSYCHOLOGICAL STATISTICS . . . . .	M-12
LAB STATISTICS PACKAGE . . . . .	M-13
LINEAR PROGRAMMING . . . . .	M-13
LINEAR REGRESSION . . . . .	M-13
MICRO TSP VERSION 3.1 . . . . .	M-13
MULTIPLE REGRESSION ANALYSIS . . . . .	M-14
NUMERICAL ANALYSIS . . . . .	M-14
REGRESS . . . . .	M-14
REGRESSION I . . . . .	M-14
REGRESSION II (PARAFIT) . . . . .	M-14
SOFTWARE PAC #3 . . . . .	M-15
STATISTICAL ANALYSIS . . . . .	M-15
STATISTICAL ANALYSIS GROUP . . . . .	M-15
STATISTICS . . . . .	M-16
STATISTICS (BIO) II . . . . .	M-16
STATISTICS PAC . . . . .	M-16
STATISTICS PACKAGE . . . . .	M-16
STATISTICS WITH DAISY . . . . .	M-17
STATPRO (MAINFRAME STATISTICS ON AN APPLE) . . . . .	M-17
STATS . . . . .	M-18
STEPWISE MULTIPLE REGRESSION . . . . .	M-18
TRIG/CIRCLE TANGENT . . . . .	M-19
TWG/ARIMA . . . . .	M-19

## MEDICAL INTRODUCTION

## MEDICAL EDUCATION

## MEDICAL

## BUSINESS/BILLING

ACCOUNTS RECEIVABLE . . . . .	MD-1
ADAMM . . . . .	MD-1
AUTOMATED MEDICAL ADMINISTRATOR . . . . .	MD-1

CAMP COMP 1 . . . . .	MD-2
CARDIO-RESPIRATORY DEPARTMENTAL ANALYSIS . . . . .	MD-3
CFT'S "HEALTHCARE SOFTWARE PACKAGE" . . . . .	MD-3
COMMA - (COMPREHENSIVE MEDICAL MANAGEMENT FOR THE APPLE) . . . . .	MD-4
DENTAL BILLING SYSTEM . . . . .	MD-4
DENTAL INSURANCE FORM WRITER . . . . .	MD-5
DENTAL SECRETARY . . . . .	MD-5
DENTAL-MEDICAL OFFICE DATA . . . . .	MD-5
DENTISTAID (TM) . . . . .	MD-6
DOCTOR'S OFFICE COMPANION . . . . .	MD-6
ELEMENTS OF MEDICAL TERMINOLOGY . . . . .	MD-7
FRONT DESK MANAGER . . . . .	MD-7
MEDICAL BILLING SYSTEM . . . . .	MD-7
MEDICAL SECRETARY . . . . .	MD-8
MEDPAC . . . . .	MD-8
MEDPAC/DENTPAC . . . . .	MD-9
PHYSICIANS MANAGEMENT INFORMATION SYSTEMS . . . . .	MD-9
RESPACCOUNT . . . . .	MD-9
RESPACCOUNT II . . . . .	MD-9
SCHEDULE PROCESSOR . . . . .	MD-10
SOFT-CHIROPRACTIC . . . . .	MD-10
SOFT-DENTAL . . . . .	MD-10
SOFTCARE OVERVIEW . . . . .	MD-10

## EDUCATION

CIRCULATION-ORGANS . . . . .	MD-13
CIRCULATION-SYSTEM . . . . .	MD-13
CLINICAL LABORATORY ANALYSIS SYSTEM I . . . . .	MD-13
COMPUTERIZED CLINICAL SIMULATIONS AND CAI . . . . .	MD-13
MICROCOMPUTERS AND PHYSIOLOGICAL SIMULATION . . . . .	MD-15
MISC. PROFESSIONAL DISK . . . . .	MD-15
PROFESSIONAL DISK . . . . .	MD-16
REPRODUCTION ORGANS . . . . .	MD-16
REPRODUCTION-PROCESS . . . . .	MD-16
THE DIGESTIVE SYSTEM . . . . .	MD-16
THE HEART . . . . .	MD-16

## TREATMENT/DIAGNOSTIC

ABG QUALITY CONTROL . . . . .	MD-17
ABG STERILIZATION . . . . .	MD-17
ALCOHOLIC TEST . . . . .	MD-17
ARTERIAL BLOOD GAS INTERPRETATION . . . . .	MD-17
CEPHALOMETRIC ANALYSIS . . . . .	MD-17
HEART ATTACKS . . . . .	MD-18
HYPNOSIS . . . . .	MD-18
MEDICAL DATA DIAGNOSTICS (MDD) . . . . .	MD-18
MICROLOOP . . . . .	MD-18
NUTRIONICS METABOLIC MANAGEMENT SYSTEM . . . . .	MD-19
PATIENT WORK-UP . . . . .	MD-19
PULMONARY FUNCTION SPIROMETER . . . . .	MD-19
PHYSICAL EXAM . . . . .	MD-19
SPIROMETRY INTERPRETATION . . . . .	MD-19
SPIROSOFT SYSTEM ONE . . . . .	MD-20

## MUSIC/SOUND RELATED

ALPHA 2 . . . . .	MU-1
ALPHA SYNTAURI . . . . .	MU-2
AMD - THE ASSISTANT MUSIC DIRECTOR . . . . .	MU-2
APPLE MUSIC . . . . .	MU-3
APPLE MUSIC I - 9 VOICES . . . . .	MU-3
APPLE MUSIC THEORY . . . . .	MU-3

APPLEODIOC . . . . .	MU-4
APPLESACK 6 - MUSIC & GRAPHICS . . . . .	MU-4
DIGISONG PAKS . . . . .	MU-4
DOUBLE ALBUMS . . . . .	MU-5
INTROL SUPER VOICE . . . . .	MU-5
MICRO COMPOSER . . . . .	MU-5
MIMIC SPEECH PROCESSOR . . . . .	MU-6
MULTIMUSIC . . . . .	MU-7
MUSIC BOX . . . . .	MU-7
MUSIC II . . . . .	MU-8
MUSICOMP . . . . .	MU-9
NAME THAT TUNE . . . . .	MU-9
NOTEWRITER . . . . .	MU-9
SINGLE ALBUMS . . . . .	MU-10
SONGS IN THE KEY OF APPLE . . . . .	MU-10
SOUNDCHASER . . . . .	MU-10
SOUNDWARE MUSIC BOX . . . . .	MU-11
THE ELECTRIC DUET . . . . .	MU-12
THE V100 INTERACTIVE VOICE SYNTHESIZER . . . . .	MU-12
THE VOICE . . . . .	MU-12

## PERSONAL/HOME USE INTRODUCTION

### PERSONAL/HOME USE

16K NATAL PACKAGE . . . . .	PH-1
8K NATAL PACKAGE . . . . .	PH-1
A CHRISTMAS STORY . . . . .	PH-1
AA2.5 PLANETS . . . . .	PH-1
AA3 PLANETS . . . . .	PH-1
ADVANCED COORDINATES . . . . .	PH-2
ADVANCED SOLUNARS . . . . .	PH-2
ALCOHOL . . . . .	PH-2
APPLE BARREL II . . . . .	PH-2
APPLE MENU COOKBOOK . . . . .	PH-3
APPLE SACK 2- HOME EDUCATION . . . . .	PH-3
APPLEROOTS . . . . .	PH-3
ASTRO-SCOPE . . . . .	PH-3
ASTROAPPLE . . . . .	PH-4
ASTROLOGY . . . . .	PH-4
AUTO RECORDS . . . . .	PH-5
AUTOMATED CHART SERVICE . . . . .	PH-5
BANK ACCOUNT MANAGER . . . . .	PH-5
BIBLE QUIZ . . . . .	PH-5
BIO-PRINTER . . . . .	PH-6
BIORHYTHM COMPATIBILITY ANALYSIS . . . . .	PH-6
BREAKING AWAY . . . . .	PH-6
CALORIE COUNTER . . . . .	PH-6
CAROLING CAROLING SERIES . . . . .	PH-6
CHART WRITER: WRITTEN NATAL REPORT . . . . .	PH-6
CHECKBOOK . . . . .	PH-8
CHEQUEMATE . . . . .	PH-8
CHIRON PACKAGE . . . . .	PH-8
COMBIOLOGICAL DIAL PRINTER . . . . .	PH-8
COMPARATIVE BUYING . . . . .	PH-9
COMPLETE DISK SYSTEM . . . . .	PH-9
COMPLETE PROGRESSIONS AND DIRECTIONS . . . . .	PH-9
COMPLETE SYNASTRY PACKAGE . . . . .	PH-10
COMPOSITES AND RELATIONSHIP . . . . .	PH-10
COMPUTER CAJUN CUISINE . . . . .	PH-11
CYCLE GRAPHS . . . . .	PH-11
DESIGNER PICTURE SERIES . . . . .	PH-11
DESK CALENDAR II . . . . .	PH-11
DISK-O-CHECK . . . . .	PH-12



ENERGY MISER . . . . .	PH-12
EXECUTIVE FITNESS . . . . .	PH-12
FAMILY BUDGET ANALYSIS . . . . .	PH-12
FAMILY FINANCIAL PLANNER . . . . .	PH-12
FAMILY FUN . . . . .	PH-13
FAST FACTS . . . . .	PH-13
GENERAL NATAL PACKAGE . . . . .	PH-13
GROCERY LIST . . . . .	PH-14
HOME ACCOUNTANT . . . . .	PH-14
HOME FINANCE PAK I . . . . .	PH-14
HOME FINANCE PROGRAM . . . . .	PH-14
HOME INVENTORY FILE . . . . .	PH-15
HOME MONEY MINDER . . . . .	PH-15
HOME SAFE HOME . . . . .	PH-15
HOME-1 . . . . .	PH-15
HYPER TIGER . . . . .	PH-15
INCOME PROPERTY CASH FLOW LEVERAGE . . . . .	PH-15
INTERLUDE . . . . .	PH-16
JOB READINESS - ASSESSMENT AND DEVELOPMENT . . . . .	PH-16
KNOW YOURSELF . . . . .	PH-16
LUCKY DAY NUMEROLOGY REPORT . . . . .	PH-16
LUCKY LOTTERY REPORT . . . . .	PH-16
MAGAZINE FILE . . . . .	PH-16
MATRIX DISK EPHEMERIDES (1700-2300) . . . . .	PH-17
MENU PLANNER . . . . .	PH-18
MORTGAGE . . . . .	PH-18
MOSTLY BASIC HOUSEHOLD PROGRAM PACKAGE . . . . .	PH-18
MUSIC RETRIEVAL SYSTEM (M.R.S.) . . . . .	PH-19
NAME & ADDRESS . . . . .	PH-19
NATAL HOROSCOPE PACKAGE . . . . .	PH-19
NIGHT BEFORE CHRISTMAS . . . . .	PH-20
NUTRICALC . . . . .	PH-21
PERSONAL ACCOUNTANT . . . . .	PH-21
PERSONAL ACCOUNTING SYSTEM I . . . . .	PH-21
PERSONAL EXPENSE RECORD . . . . .	PH-21
PERSONAL FINANCE MANAGER . . . . .	PH-21
PIP I . . . . .	PH-22
PIP II . . . . .	PH-22
PLANET ACCURACY . . . . .	PH-22
POISON YOUR HOME . . . . .	PH-23
PRINTING PACKAGE . . . . .	PH-23
PRO-PRINTING PACKAGE . . . . .	PH-23
PSYCHOTHERAPY . . . . .	PH-23
Q-PON HELPER . . . . .	PH-23
RAYED-WHEEL PRINTING PACKAGE . . . . .	PH-24
RECIPE FILE . . . . .	PH-24
SEX-O-SCOPE . . . . .	PH-24
SOFTWARE PAC #1 (Some Common Basic Programs) . . . . .	PH-24
SOLAR AND LUNAR RETURNS . . . . .	PH-25
SOLAR ARC DIRECTIONS . . . . .	PH-25
TAXMAN-82 . . . . .	PH-25
TEQUILA SUNRISE . . . . .	PH-26
THE COUNT (A WINNING BLACKJACK SYSTEM) . . . . .	PH-26
THE HOME ACCOUNTANT . . . . .	PH-27
THE MENU II . . . . .	PH-27
THE SEXUALITY LIFE DYNAMIC . . . . .	PH-27
THE TIME TRAVELER . . . . .	PH-28
TRANSIT ANALYSIS: WHERE AND WHEN . . . . .	PH-28
TRANSITS AND SECONDARY PROGRESSIONS . . . . .	PH-28
URANIAN PLANETS . . . . .	PH-29
URANIAN PRINTING PACKAGE . . . . .	PH-29

## PROGRAMMING AIDS/UTILITIES

### APPLESOFT UTILITIES

##APPLEPRINT## USING . . . . .	PA-1
A.C.E. (APPLESOFT COMMAND EDITOR) . . . . .	PA-1
ADVANCED X-TENDED EDITOR (AXE) . . . . .	PA-1
AMPER-INTERPRETER UTILITIES . . . . .	PA-2
AMPERSOFT PROGRAM LIBRARY VOLUME 1 . . . . .	PA-2
APLUS . . . . .	PA-3
APPLE CONCORDANCE . . . . .	PA-3
APPLE II UTILITY PACK . . . . .	PA-3
APPLE SACK 4- UTILITY PAK . . . . .	PA-4
APPLE SPICE . . . . .	PA-4
APPLE-AIDS . . . . .	PA-4
APPLESOFT II UTILITY I . . . . .	PA-4
APPLESOFT LINEFINDER . . . . .	PA-5
APPLESOFT PLUS STRUCTURED BASIC (APLUS) . . . . .	PA-5
APPLESOFT PROGRAM OPTIMIZER (AOPT) . . . . .	PA-5
APPLESOFT PROGRAMMER . . . . .	PA-5
APPLESOFT UTILITY PROGRAMS . . . . .	PA-6
APPLICATION TEXT EDITOR . . . . .	PA-6
B.E.S.T. . . . .	PA-6
BASIC A+ . . . . .	PA-7
BASIC OPTIMIZER . . . . .	PA-7
BROWNPack I . . . . .	PA-7
BUILD USING . . . . .	PA-7
DAKIN 5 PROGRAMMING AIDS 3.3 . . . . .	PA-8
EPF IV . . . . .	PA-9
FORM-DS . . . . .	PA-9
GLOBAL PROGRAM LINE EDITOR . . . . .	PA-10
LIST MASTER . . . . .	PA-10
LISTPRO . . . . .	PA-10
MACRO SCED (SCREEN EDITOR) . . . . .	PA-11
PBASIC-DS . . . . .	PA-11
PRINT II . . . . .	PA-11
PROGRAM CONTROLLER . . . . .	PA-11
PROGRAM LINE EDITOR . . . . .	PA-11
PROGRAMMER'S UTILITY PACK . . . . .	PA-11
QUICKTRACE . . . . .	PA-12
RENUMBER AND APP . . . . .	PA-12
REVIVE . . . . .	PA-13
SLOW LIST/STOP LIST . . . . .	PA-13
SOFT-STEP . . . . .	PA-13
SPEED-DS . . . . .	PA-14
SUPER APPLE BASIC . . . . .	PA-14
SUPEREDIT . . . . .	PA-14
THE ROUTINE MACHINE . . . . .	PA-14
TONE ROUTINE GENERATOR . . . . .	PA-14
UNLISTABLE BASIC . . . . .	PA-15
UTIL-DS . . . . .	PA-15
UTILITY CITY . . . . .	PA-15

### ASSEMBLERS

6502 DEVELOPMENT SYSTEM . . . . .	PA-18
6502 DISASSEMBLER . . . . .	PA-18
6502 MACRO ASSEMBLER . . . . .	PA-18
6502-C PROCESSOR MODULE . . . . .	PA-18
8080 SIMULATOR . . . . .	PA-18
ALD SYSTEM II . . . . .	PA-19
APEX . . . . .	PA-19
APPLE A.L.D.S. . . . .	PA-19
APPLE II 6-CHARACTER EDITOR/ASSEMBLER . . . . .	PA-19

APPLE-80 . . . . .	PA-20
APPLEBUG . . . . .	PA-21
APPLETEXT - AN APPLE II DISASSEMBLER . . . . .	PA-22
ASM/65 EDITOR ASSEMBLER . . . . .	PA-22
ASSEMBLER TEACHER . . . . .	PA-23
ASSEMBLY LANGUAGE DEVELOPMENT SYSTEM . . . . .	PA-23
BUGBYTER . . . . .	PA-23
CLONE ASSEMBLER . . . . .	PA-24
CO-RESIDENT ASSEMBLER . . . . .	PA-24
COSAPPLE . . . . .	PA-24
CRAE 2.0 . . . . .	PA-25
DATASM/65 EDITOR/ASSEMBLER . . . . .	PA-25
DISASM/65 . . . . .	PA-25
DOSOURCE 3.3 . . . . .	PA-26
DOWN DATER . . . . .	PA-26
DSA-DS . . . . .	PA-26
EDIT 6502 . . . . .	PA-26
JOHN'S DEBUGGER RELEASE II . . . . .	PA-27
LISA 2.5 . . . . .	PA-28
LISA EDUCATIONAL SYSTEM . . . . .	PA-28
MACRO ASSEMBLER TEXT EDITOR (MAE) . . . . .	PA-28
MICROPRODUCTS MDS . . . . .	PA-29
MONITOR EXTENDER . . . . .	PA-30
MUNCH-A-BUG . . . . .	PA-30
RELOCATING LINKING LOADER . . . . .	PA-31
SIMULATORS . . . . .	PA-32
THE BUG . . . . .	PA-32
TRANSLATOR . . . . .	PA-32
WOZPAK II . . . . .	PA-32
XREF/65 . . . . .	PA-32

## COMPILERS

APPLESOFT COMPILER . . . . .	PA-33
EXPEDITER II + . . . . .	PA-33
FLASH! . . . . .	PA-34
HAYDEN APPLESOFT COMPILER . . . . .	PA-34
PBASICS-DS . . . . .	PA-35
SPEED STAR . . . . .	PA-35
THE INTEGER BASIC COMPILER . . . . .	PA-35

## DISK UTILITIES

128K RAM . . . . .	PA-37
AMPER-READER . . . . .	PA-37
AMPER-READER II . . . . .	PA-37
ANIX 1.0 . . . . .	PA-37
APPLE DISK FIXER . . . . .	PA-37
APPLEGUARD . . . . .	PA-38
B-COPY . . . . .	PA-38
BACK IT UP II . . . . .	PA-38
BINARY FILE COPY . . . . .	PA-39
BYTE TRANSCRIBER I . . . . .	PA-39
CATALOG SORTER . . . . .	PA-39
CODEX CATALOG . . . . .	PA-39
CONTROL PROGRAM . . . . .	PA-39
COPY II PLUS . . . . .	PA-40
DAN'S DISK UTILITIES . . . . .	PA-40
DARK - THE DISK REPAIR KIT . . . . .	PA-41
DATACOPE TEXT FILE COPY . . . . .	PA-41
DIRECTORY MANAGER . . . . .	PA-42
DIRECTORY MASTER . . . . .	PA-42
DISC-O-DOC . . . . .	PA-43
DISK CERTIFIER AND COPIER . . . . .	PA-43

DISK DOCTOR . . . . .	PA-43
DISK EMULATOR . . . . .	PA-43
DISK FIXER . . . . .	PA-44
DISK FIXER MONITOR EXTENDER . . . . .	PA-44
DISK ORGANIZER II . . . . .	PA-44
DISK PREP . . . . .	PA-45
DISK RECOVERY . . . . .	PA-45
DISK TEXT EDITOR EDIT-II . . . . .	PA-45
DISK UTILITIES 3.0 . . . . .	PA-46
DISK UTILITY PACK . . . . .	PA-46
DISK ZAP . . . . .	PA-46
DISK-O-TAPE . . . . .	PA-46
DOS 3.3 . . . . .	PA-47
DOS 3.3 UTILITIES . . . . .	PA-47
DOS BOSS . . . . .	PA-48
DOS DATER . . . . .	PA-48
DOS PLUS . . . . .	PA-48
DOUBLE DOS . . . . .	PA-49
DOUBLEBOOT FOR LANGUAGE CARD . . . . .	PA-49
FILE COMPARE . . . . .	PA-49
FILE MAKER . . . . .	PA-50
FILER . . . . .	PA-50
FLEX DOS . . . . .	PA-51
GAF UTILITY PACKAGE 1 . . . . .	PA-51
GAF UTILITY PACKAGE 2 . . . . .	PA-52
HIGH SPEED INIT . . . . .	PA-52
INTRODUCING COPY II PLUS (VERSION II) . . . . .	PA-52
LOCK-IT-UP 4.1 . . . . .	PA-53
MASTER CATALOG V2.0 . . . . .	PA-53
MASTERDISK . . . . .	PA-53
MASTERDOS-DOS CUSTOMIZING DISK . . . . .	PA-54
MCAT . . . . .	PA-54
MEMORY MASTER 1.1 . . . . .	PA-54
MENU ASSORTMENT . . . . .	PA-55
MENU GENERATOR (DISK ORGANIZING SYSTEM) . . . . .	PA-55
MULTI-DISK CATALOG . . . . .	PA-56
MULTIBOOT UPGRADE . . . . .	PA-56
NIBBLES AWAY II . . . . .	PA-56
ONGOING IDEAS DISK UTILITIES 2.1 . . . . .	PA-57
ORIGINAL QUICKLOADERS . . . . .	PA-57
OS/A+ . . . . .	PA-58
PIG-DOS . . . . .	PA-58
PSEUDODISK: A DISK SIMULATOR FOR INTEGER BASIC . . . . .	PA-58
SINGLE DISK COPY . . . . .	PA-58
THE DI SECTOR DISK . . . . .	PA-59
THE MANIPULATOR . . . . .	PA-59
THE UTILITIES DISK . . . . .	PA-59
TRACK & SECTOR LIST . . . . .	PA-59
UNIVERSAL BOOT INITIALIZER 4.0 (UBI 4.0) . . . . .	PA-60

## LANGUAGES

ADVANCED PASCAL . . . . .	PA-61
APPLE FORTH 1.7 . . . . .	PA-61
APPLE FORTRAN . . . . .	PA-61
APPLE PILOT . . . . .	PA-63
BABBLE . . . . .	PA-63
CIS COBOL . . . . .	PA-64
FLEX-FORTH . . . . .	PA-64
FORTH-79 . . . . .	PA-65
FORTTRAN TRANSCENDENTAL ROUTINES . . . . .	PA-65
HAND HOLDING BASIC . . . . .	PA-65
MACROLINK . . . . .	PA-66
STRUCTURED BASIC . . . . .	PA-67



SUPERFORTH . . . . .	PA-67
TRANSFORTH II . . . . .	PA-67

# MISCELLANEOUS

32K RAM . . . . .	PA-68
A.M.P. . . . .	PA-68
ACTION SOUNDS AND HI RES SCROLLING . . . . .	PA-68
AMPERSOFT . . . . .	PA-68
APPLE DOCTOR . . . . .	PA-69
APPLE MECHANIC . . . . .	PA-69
ARCADE MACHINE . . . . .	PA-69
BASIC AID . . . . .	PA-70
BAUDOT TELETYPE DRIVER . . . . .	PA-70
BEAGLE BROS TIPDISK . . . . .	PA-70
BEGINNING BASIC . . . . .	PA-70
CHIPS-TTL & CMOS . . . . .	PA-71
EDIT MASTER . . . . .	PA-71
FORM-IT-OUT . . . . .	PA-71
FORMULA READER . . . . .	PA-71
HEX DEC FOR LANGUAGE CARD . . . . .	PA-71
EP12 PRINTER INTERFACE . . . . .	PA-72
IMAGE PRINTER (EPSON) . . . . .	PA-72
INTEGRITY PLUS . . . . .	PA-73
KEYBOARD RECORDER . . . . .	PA-73
LABEL SPLITTER . . . . .	PA-73
LABORATORY TOOL KIT! . . . . .	PA-73
LITTLE TRICKS . . . . .	PA-74
MEMORY TEST . . . . .	PA-74
MPE (MEMORY-PAGE-EDITOR) . . . . .	PA-74
NUMERIC KEYPAD . . . . .	PA-75
OK 12 PRINTER INTERFACE . . . . .	PA-75
PRINT FILE READER . . . . .	PA-75
PROGRAM UNLOAD . . . . .	PA-76
QUICK CLOCK ADJUST . . . . .	PA-76
RAM TEST . . . . .	PA-76
SCROLL CONTROL . . . . .	PA-76
SLIDE SELECT PROGRAM . . . . .	PA-76
SMARTYPE . . . . .	PA-77
SOFT SEVENTY . . . . .	PA-77
SOUND ON . . . . .	PA-77
SUPER SOUND . . . . .	PA-77
TAPE LOAD AIDS . . . . .	PA-77
THE AUTOMANIAC SYSTEM . . . . .	PA-78
THE BASIC TEACHING PAC . . . . .	PA-78
THE BRAIN SURGEON (A DIAGNOSTIC PACKAGE) . . . . .	PA-78
THE INTEGER FIX . . . . .	PA-79
THE TOOL . . . . .	PA-80
ULTIMATE TRANSFER . . . . .	PA-80
uSPEED . . . . .	PA-80
UTILITY BOOK . . . . .	PA-81
UTILITY I . . . . .	PA-81
V.I.P. II . . . . .	PA-81
V-UTILITY . . . . .	PA-82
V.I.P. II . . . . .	PA-82
VC-EXPAND . . . . .	PA-82
VIDEOTERM UTILITIES DISC . . . . .	PA-82
VISIBLEND . . . . .	PA-83
VISIFACTORY . . . . .	PA-83
WIDTH ADJUSTER . . . . .	PA-83

## PASCAL UTILITIES

ABTOOL I . . . . .	PA-84
ABTOOL II . . . . .	PA-84
APPLE PASCAL . . . . .	PA-85
INTEGER PASCAL SYSTEM . . . . .	PA-88
KAREL THE ROBOT . . . . .	PA-89
LINKDISK . . . . .	PA-89
LINKINDEX . . . . .	PA-90
LINKVIDEO . . . . .	PA-90
PAS-LOW . . . . .	PA-91
PASCAL INTERACTIVE TERMINAL SOFTWARE . . . . .	PA-91
PASCAL LEVEL 1 . . . . .	PA-92
PASCAL LOWER CASE . . . . .	PA-92
PASCAL MASTER DIRECTORY . . . . .	PA-92
PASCAL PROGRAMMER . . . . .	PA-92
PASCAL PROGRAMMING TOOL . . . . .	PA-93
PASCAL SOFT-DISK EMULATOR . . . . .	PA-93
PASCAL TOOLS I & II . . . . .	PA-93
PASCAL TRANSCENDENTAL ROUTINES . . . . .	PA-94
PASCAL TUTOR . . . . .	PA-94
PSORT . . . . .	PA-94
UCSD p-SYSTEM . . . . .	PA-95
BRIDGE . . . . .	PA-95

## SORTS

AMPER SORT II . . . . .	PA-96
AMPER-SEARCH . . . . .	PA-96
AMPER-SORT/MERGE (A-S/M) . . . . .	PA-96
DATACOPE SINGLE DISK SORT . . . . .	PA-96
HYPERSORT . . . . .	PA-97
KRAM . . . . .	PA-98
SINGLE DISK SORT . . . . .	PA-98
SORT . . . . .	PA-98
SUPER KRAM . . . . .	PA-99
SUPER SORT . . . . .	PA-99
SUPER SORT & SEARCH . . . . .	PA-100

## SPECIAL INTEREST

AIR FLIGHT SIMULATION . . . . .	SI-1
AIRCRAFT IDENTIFICATION . . . . .	SI-1
AMATEUR RADIO LOG . . . . .	SI-1
AUTOMOBILE TROUBLESHOOTER . . . . .	SI-1
BIRDBREED . . . . .	SI-1
CLOCK 3 . . . . .	SI-2
DIET ANALYSIS . . . . .	SI-2
DISK-BASED MAILING LIST OF U.S. CONGRESSMEN & SENATORS . . . . .	SI-3
DISKETTE DUPLICATING SERVICE . . . . .	SI-3
DOCUMENTATION . . . . .	SI-3
ELIZA . . . . .	SI-4
FLIGHT SIMULATOR . . . . .	SI-4
FLIGHT VECTOR . . . . .	SI-4
LINEAGES . . . . .	SI-5
MICRO-ATLAS . . . . .	SI-5
MORSE CODE SYSTEM . . . . .	SI-6
POLITICAL PARTY MAILING LIST . . . . .	SI-6
PRO-PIX '81 . . . . .	SI-6
SUBLIM . . . . .	SI-6
THE COIN COLLECTOR CATALOG . . . . .	SI-6
THE FLIGHT PLANNER . . . . .	SI-7
THE FOOTBALL COMPU-STAT . . . . .	SI-8
THE STAMP COLLECTOR . . . . .	SI-9

THE STAR GAZER'S GUIDE . . . . .	SI-10
THE STRAIGHT LINE . . . . .	SI-10
THE WORD PROCESSOR . . . . .	SI-11

## TIME SHARING INTRODUCTION

### TIME SHARING

ABT VT-100 TERMINAL EMULATOR . . . . .	TS-1
COMM-PAC . . . . .	TS-1
COMP*U*STAR . . . . .	TS-1
DOW JONES NEWS/RETRIEVAL . . . . .	TS-2
MICRONET . . . . .	TS-4
NESTAR CLUSTER/ONE MODEL A . . . . .	TS-4
ONE MEGABAUD NETWORK . . . . .	TS-5
THE KUSSMAUL ENCYCLOPEDIA . . . . .	TS-5
THE KUSSMAUL ENCYCLOPEDIA/SYSTEM DC . . . . .	TS-6
THE SOURCE . . . . .	TS-6

### WORD PROCESSING

APPEN 1 TEXT EDITOR . . . . .	WP-1
APPLE II TEXTWRITER . . . . .	WP-1
APPLE TEXT PROCESSOR/APPLE SIMON/PAPER TIGER GRAPHICS . . . . .	WP-1
APPLE WRITER . . . . .	WP-2
APPLE-SCRIBE-2 . . . . .	WP-3
AUTHORING SYSTEM FOR TRAINERS AND EDUCATORS . . . . .	WP-3
CAVECORD: THE PROFESSIONAL INFORMATION MANAGER . . . . .	WP-4
CAVRIDEX . . . . .	WP-4
DISK APPLE II REPORT TEXT WRITER - DART . . . . .	WP-4
DR. MEMORY . . . . .	WP-4
EASYFILER . . . . .	WP-5
EASYSPELLER . . . . .	WP-5
EASYWRITER ORIGINAL . . . . .	WP-6
EASYWRITER PROFESSIONAL . . . . .	WP-6
EDITRIX . . . . .	WP-7
ELECTRONIC SECRETARY . . . . .	WP-7
FORM LETTER . . . . .	WP-7
FORM LETTER MODULE . . . . .	WP-7
FORMAT II . . . . .	WP-7
FORMAT ROM . . . . .	WP-8
GHOSTWRITER (TM) . . . . .	WP-9
GOODSPELL . . . . .	WP-9
HAM COMMUNICATIONS PACKAGE . . . . .	WP-10
KEY PERFECT . . . . .	WP-10
LETTER MASTER . . . . .	WP-10
LETTER PERFECT . . . . .	WP-10
LETTER PROCESSOR . . . . .	WP-11
LETTERITE . . . . .	WP-11
LEXICOM . . . . .	WP-11
MAGIC WINDOW . . . . .	WP-11
MAGIC WINDOW II . . . . .	WP-12
MAGIC WORDS . . . . .	WP-13
MIGHTY MITE (WORD PROCESSOR) . . . . .	WP-13
MULTI-MESSAGE WITH INTERLEAVED COLOR PATTERNS . . . . .	WP-13
PAGE PROCESSOR . . . . .	WP-14
PERSONAL TEXT PROCESSOR . . . . .	WP-14
PIE WRITER . . . . .	WP-14
PIG PEN . . . . .	WP-15
PRINTER TYPER . . . . .	WP-15
QUICKWRITER . . . . .	WP-15
REPORT WRITER . . . . .	WP-15
SCREEN WRITER . . . . .	WP-16
SELECT . . . . .	WP-17

SUPER MESSAGE . . . . .	WP-18
SUPER TEXT . . . . .	WP-18
SUPER-TEXT 40/56/70 . . . . .	WP-18
SUPER-TEXT ADD-ON MODULES . . . . .	WP-19
SUPER-TEXT II . . . . .	WP-19
SUPERSCRIBE II . . . . .	WP-20
TEXT EDITOR . . . . .	WP-20
TEXT EDITOR I . . . . .	WP-21
TEXT FILE EDITOR . . . . .	WP-21
TEXT POWER . . . . .	WP-21
THE APPLE SPELLER . . . . .	WP-21
THE CORRESPONDENT . . . . .	WP-22
THE DATACOPE SCRIBE . . . . .	WP-22
THE DICTIONARY . . . . .	WP-23
THE EXECUTIVE SECRETARY . . . . .	WP-24
THE EXECUTIVE SPELLER . . . . .	WP-25
THE GENERAL MANAGER . . . . .	WP-26
THE PERSONAL SECRETARY . . . . .	WP-26
THE PROMPT-DOC . . . . .	WP-26
THE SENSIBLE SPELLER FACTS . . . . .	WP-27
THE WORD HANDLER . . . . .	WP-28
THE WORD PLUS . . . . .	WP-29
TXT/ED 2.0 (WORD PROCESSOR) . . . . .	WP-29
VARIABLE MESSAGE . . . . .	WP-29
WORD POWER . . . . .	WP-29
WORD PROCESSING . . . . .	WP-30
WORD PROCESSING PROGRAM . . . . .	WP-30
WORD PROCESSOR . . . . .	WP-30
WORD PROCESSOR . . . . .	WP-30
WORD PROCESSOR II . . . . .	WP-30
WORDPOWER . . . . .	WP-31
ZARDAX - THE APPLE II WORD PROCESSOR . . . . .	WP-31



## AGRICULTURE

The microcomputer is being acclaimed by many as the most revolutionary new agricultural tool since the advent of the tractor...and well it should! Technology has now made it economically justifiable for farming businesses to benefit from the use of a computer that larger businesses have used for decades. We have left the era where high productivity and high profitability were synonymous and have entered an era where profitability is contingent on professional business management decisions. The microcomputer can aid you in making these decisions in many ways.

Some of the most popular programs are "Decision Aids" programs. These allow the user to enter his/her current production information for analysis and allow the user to ask "What if..." Needless to say, the operator could do the same with a pencil, but the speed and accuracy of the computer makes it a most attractive option. And one decision made differently because of the computer, could well pay for the computer and software!

Financial and Production Recordkeeping programs are also extremely popular. If the user currently keeps inadequate records or is unable to correctly understand his records, the computer may be of little benefit. But, for the individual who recognizes the importance of good records in making sound management decisions, the computer can be a very valuable tool. The computer has the capacity to store and quickly sort through large amounts of data to compile the information needed, and wanted for sound decision making. This data is always as current as the user wishes- no waiting six weeks for printouts from a "mainframe" computer!

Many computer owners are also using the computer's ability to communicate with other computers via the telephone. Many "timesharing networks" are available, offering current market information, U.S.D.A. reports, decision aids, information regarding weather implications on agriculture, current pest and disease problems and their prevention or treatment. This daily information can be very beneficial for all farming operations at relatively low costs.

We have seen that when new technology becomes available, those who do not adapt that technology are soon left behind. We will also find this to be true with the computer. Soon, those who are using computers will be making management decisions superior to those made without the aid of the computer. And, those who have the ability to adapt this new technology will benefit greatly. Why not be among this group?

Steven J. Krogmeier  
Virgil L. Schmidt  
AG-COM INC.

# AGRICULTURE

205 DAY ADJUSTED WEANING WEIGHTS . . . . .	AG-1
AG-NALYSIS . . . . .	AG-1
AGRICALC . . . . .	AG-2
BEEF FEEDER PROJECTION . . . . .	AG-3
BEEF FEEDLOT RECORDS AND ANALYSIS . . . . .	AG-3
BEEF PRODUCTION . . . . .	AG-3
BUDGET ANALYSIS . . . . .	AG-4
BUDGETING SYSTEM . . . . .	AG-4
CALF PRODUCTION RECORDS . . . . .	AG-4
CASH CROP PROJECTION . . . . .	AG-4
CATTLE FEEDING ECONOMICS . . . . .	AG-4
COMMERCIAL CATTLE FEEDING PROGRAM . . . . .	AG-4
COMPULIZE SYSTEM . . . . .	AG-5
COMPUTERIZED FARM ACCOUNTING SYSTEM (CFAS) . . . . .	AG-6
COMPUTERIZED FARM RECORDS . . . . .	AG-6
CORN HARVEST LOSSES . . . . .	AG-7
CORN VS. AN ALTERNATE CROP . . . . .	AG-7
CORN/SOYBEAN MANAGEMENT SERIES ONE . . . . .	AG-7
COW-CALF PROFITABILITY . . . . .	AG-8
CROP HISTORY . . . . .	AG-8
CROP MANAGEMENT PACKAGE . . . . .	AG-8
CROP PRODUCTION . . . . .	AG-8
CROP YIELDS . . . . .	AG-9
CUSTOM MEAT PROCESSING SYSTEM . . . . .	AG-9
CYBER-FARMER . . . . .	AG-9
DAIRY ENTERPRISE ANALYSIS SYSTEM . . . . .	AG-10
DAIRY HERD MANAGEMENT PACKAGE . . . . .	AG-10
DAIRY HERD MANAGEMENT SYSTEM . . . . .	AG-10
DAIRY PRODUCTION . . . . .	AG-10
DAIRY, BEEF, AND SWINE RATIONS . . . . .	AG-10
DAY ADJUSTED WEANING WEIGHTS . . . . .	AG-11
DEPRECIATION LOG . . . . .	AG-11
ECONOMICS OF CORN PRODUCTION . . . . .	AG-11
F.A.R.M. . . . .	AG-11
FARM ANALYST . . . . .	AG-11
FARM LEDGER . . . . .	AG-12
FARM MANAGEMENT DECISIONS . . . . .	AG-12
FARM RECORDS . . . . .	AG-12
FARMCALC W/MODELS . . . . .	AG-13
FARMER'S WORKBOOK . . . . .	AG-13
FARMFILER W/MODELS . . . . .	AG-13
FARROW-TO-FINISH SWINE PRODUCTION . . . . .	AG-13
FEEDER . . . . .	AG-13
FEEDER PIG PRODUCTION . . . . .	AG-14
FERTILIZER FORMULATION . . . . .	AG-14
FERTILIZER RECOMMENDATIONS PACKAGE . . . . .	AG-14
FIELD & CROP RECORDS SYSTEM . . . . .	AG-14
FIELD POPULATION . . . . .	AG-14
FIELD SIZE . . . . .	AG-14
FINANCIAL UTILITIES . . . . .	AG-15
FINISHING FEEDER PIGS . . . . .	AG-15
GENERAL LEDGER SYSTEM . . . . .	AG-15
HOG FARROWING PROJECTION . . . . .	AG-15
HOG MANAGEMENT PACKAGE . . . . .	AG-15
HOG PRODUCTION . . . . .	AG-16
LEAST COST RATION FORMULATION . . . . .	AG-16
LIMING SOIL . . . . .	AG-16
LIQUID MANURE AND FERTILIZER . . . . .	AG-16
LIVESTOCK BREAK-EVEN ANALYSIS . . . . .	AG-16
MACHINERY MANAGEMENT SERIES ONE . . . . .	AG-17
NET ENERGY FOR FEEDLOT CATTLE . . . . .	AG-17
PIC PACKAGE . . . . .	AG-18

PROTEIN BALANCING FOR FEEDLOT CATTLE . . . . .	AG-18
SEED CORN DEALER'S SYSTEM . . . . .	AG-18
SELLING WET CORN VS. DRY . . . . .	AG-18
SHEEP PRODUCTION ECONOMICS . . . . .	AG-18
SOIL TEST RECOMMENDATION . . . . .	AG-18
SOYBEAN HARVEST LOSSES . . . . .	AG-18
SWINE ENTERPRISE ANALYSIS SYSTEM . . . . .	AG-19
SWINE RATION ANALYSIS . . . . .	AG-19
SWINE MANAGEMENT SYSTEM (B.O.A.R.S.) . . . . .	AG-19
THE CALENDAR . . . . .	AG-19
TURKEY ENTERPRISE ANALYSIS SYSTEM . . . . .	AG-20
VISICALC AGRI-DATA . . . . .	AG-20
WORKSHEET . . . . .	AG-20

**TITLE: 205 DAY ADJUSTED WEANING WEIGHTS****PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** The purpose of this program is to adjust weaning weights of calves so the performance of calves can help determine superior genetics in a beef cow herd. This program enables the use of estimated or known birth weights. A partial list of standard birth weights used by the respective breed organizations is given.

**PRICE: \$49.95****Early versions updated - Free of Charge****TITLE: AG-NALYSIS****PUBLISHERS NAME: MICRO AG**

**DESCRIPTION:** The Ag-Nalysis Package consists of two diskettes and an illustrative binder. The first disk contains eleven programs providing information required for decisions related to beef feeding rations, economics of purchasing and feeding feeders, economics of crop productions, checklist for buying a farm, and personal financial programs.

**Livestock Profitability Analysis-** This program will give a break even price for the animal on a price per pound basis in three different stages, each in relationship to the previous stage.

**Dairy Rations-** This program calculates the potential milk produces different ingredients and different cow weights that are inputted.

**Cattle Inventory-** This program is used to keep a record of number of head, description, death loss, money owed, money paid, balance of money owed, and a record of break even prices needed at three different stages.

**Economics of Feeders-** This can be used to calculate an economic return when handling feeders. Lets the user input information of fixed and variable inputs that are applicable for the immediate day. The program outputs cost to finish animal and break even, etc.

**Cow/Calf Profitability-** Is a program to help you put in the various changing inputs on a per cow basis, such as feed cost, pasture rent, interest, and other variable and fixed expenses. The program will determine the break even selling price for the calf and return per cow, etc.

**Market Weight Analysis-** This program shows the return in dollars and cents for feeding livestock in the last days before market. This shows return over feed cost and interest only, with inputs of cost per pound of gain, average daily gain, weight market price, interest, etc.

**Yield Per Acre-** This program calculated yield per acre for number two corn when given weights, measurements, and moisture.

**Economics of Crop Production-** Calculates break even per bushel and net return per acre for your given crop with your expenses. It also compares net return for two competing crops. When making forward or hedged sales, the program shows where you are as far as covering your expenses and showing profit.

**Values With Interest Adjustments-** This program calculates the value of an item when interest is added on for a given time period.

**Financial Statement (Net Worth Statement)-** Lets the user build a statement for his own use or for his lender.

**Farm Buying financial Checklist-** This program helps the user analyze the purchase or sale of a farm.

**Quarterly Cash Flow-** This program is set up on quarterly basis with space to put in last year's information, estimate of the present year and the actual dollars spent or received. The actual income and expenses are totaled and given a percentage of the total. The difference of income and expense are subtracted



to give a difference for each quarter.

The second disk contains all cattle rations for steers and heifers. there are programs for steers at 100 pound increments from 400 to 1000 pounds, and heifers from 400 to 900 pounds.

**Cattle Rations-** These programs allow the user to balance the ration for protein, calcium, and phosphorous. The program will output the expected rate of gain and cost per pound of gain with an inventory of the feed, needing in pounds, for the number of days and number of head on the specific ration.

**PRICE: \$100.00**

**TITLE: AGRICALC**

**PUBLISHERS NAME: COMPUTERLAND**

**DESCRIPTION: Depreciation Worksheet**

The Depreciation Worksheet allows you to enter information on equipment you own and figure depreciation schedules for as many as twenty-five years. One feature is that investment tax credit is prorated correctly; as a result, you can determine the most favorable depreciation method for your situation.

**Financial Statement Worksheet**

The Financial Statement Worksheet allows entry of the current status of your farm. A number of schedules, when entered, will give an accurate representation of assets, liabilities, and net worth. When you print the resulting information, you'll have a complete balance sheet.

**Agricultural Cost Analysis Worksheet**

The Agricultural Cost Analysis Worksheet is for calculation of production costs that can be displayed on a per acre basis. You can enter historical information, then update it with actual figures. Thus it will be possible to determine whether a particular crop and estimated yield are sufficient to cover production expenses.

**Personal Budget Worksheet**

The Personal Budget Worksheet begins as a typical home owner's budget. It shows monthly income and expenses as well as expense percentages of income.

**Cash Flow Worksheet**

The Cash Flow Worksheet allows you to obtain results to find needed sources of income; you estimate the amount of cash needed at various times of the year. Comparing best estimates of expenses with known income, you can determine cash flow by manipulating expenses to other months, draw on lines of credit, or sell assets, all in clear view on your worksheet picture.

**Worksheet For Interest Calculations**

The Worksheet For Interest Calculation allows you to perform simple-interest calculations. It can be used for notes or lines of credit for which the interest rates are fixed on the borrowed amount.

**Checking Account Worksheet**

The Checking Account Worksheet is a checkbook plus. As checks are entered, totals appear under appropriate expenses and are updated automatically. Deposits are appropriately entered and updated. Using VisiCalc commands, you can generate profit and loss statements, both current and year-to-date.

**Loan Schedules Worksheet**

The Loan Schedules Worksheet calculates loan amortization schedules. When you enter interest rate, loan amount, loan period, and number of payments per year, the program will give you the number of payments and amounts of each, including principal and interest.

**Vehicle Data Worksheet**

On the Vehicle Data Worksheet, you can enter the specifications, serial numbers and replacement part numbers on any vehicle. This

record becomes a handy reference file for insurance and maintenance purposes.

**Commodities Worksheet**

The Commodities Worksheet figures the current value of commodities and records the value of commodities you sell. It also keeps a running balance in the commodities account.

**Recipe Worksheet**

Slightly out of the realm of business is the Recipe Worksheet. This recipe filing system allows you to enter a number of ingredients and quantities for the desired serving size. Once quantities are entered, a new serving size will result in automatic recalculation of the needed quantities for that serving.

**PRICE: \$99.95**

**TITLE: BEEF FEEDER PROJECTION**

**PUBLISHERS NAME: H.C.I.**

**DESCRIPTION:** Calculates break even purchase price, break even selling price, profit per head, profit per group, feed estimated efficiency and rate of gain for your beef feeders.

**PRICE: \$240.00**

**TITLE: BEEF FEEDLOT RECORDS AND ANALYSIS**

**PUBLISHERS NAME: TUCKER FARM CONSULTANTS**

**DESCRIPTION:** Feed fed, vet and treatments, other expenses, cattle entry, disposals and dispersals entered in just moments for each day's activities. Projected weight from feed consumed. Manager determines files for feed sources, rations fed, megacalories of net energy. Records for last 30 days in 5-day averages for: a) feed consumed per head per day b) gain per head per day c) cost per head per day d) cost per pound of gain. Fourteen data analysis items given on a lot at the final dispersal. Cumulative health, feed, gains, cost data on the entire feedlot for a full year. Cost and returns analysis on a per lot basis, per head basis and per cwt of gain basis to answer what it questions on future feeding. Change 1 or more of 13 variables and get the new analysis in 4 seconds. Gives break even sale price given a purchase price, feed cost, interest rate, etc. and vice versa. Receivables and billing for custom lots.

**PRICE:**

**TITLE: BEEF PRODUCTION**

**PUBLISHERS NAME: CHERRYGARH FARMS SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: Two disk drives**

**DESCRIPTION:** Designed for a cow-calf operation and can be used anywhere. Individual cow information includes breeding dates, heat dates, approximate and actual calving dates, birth weights, 205 days adjusted weaning weights, yearling weights, calf's sire, calving ease, calf history, and veterinary problems. Calf and cull cow sales provide the individual cow income totals which are transferred to the total herd records for total herd income and expense information.

Expenses are recorded for the total herd and divided by the number of cows to determine the profitability per cow. These include feed and direct costs.

Feed expenses include corn, silage, hay pasture, supplement, calf creep, and miscellaneous feed expenses. Direct costs include veterinary and medicine costs, breeding costs, marketing costs, power, fuel and equipment repair, and miscellaneous costs.

Will allow the user to determine a great deal of up-to-date and accurate information about any cow or calf at any time.

**PRICE: \$200.00**

**TITLE: BUDGET ANALYSIS****PUBLISHERS NAME: DECISION DATA, INC.**

**DESCRIPTION:** With this program you can evaluate various cost factors associated with the production of corn, soybeans, corn silage, oats, wheat or hay. Inputs include a) operating costs, b) machinery ownership costs, c) labor costs, and d) land costs. These inputs are used to determine total cash flow costs, returns required to maintain net worth, and total economics costs. This information is then summarized on a per acre and per bushel (or ton) basis.

**PRICE: \$39.95****TITLE: BUDGETING SYSTEM****PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

**DESCRIPTION:** Budget figures can be entered for each income and expense account for each month when planning for the next fiscal year. As time progresses the user can get reports showing the actual amounts and their variance from the projected budget amounts for each account. More accurate budget figures can be entered and cash flow projections produced whenever necessary. These programs are used with the General Ledger.

Prices subject to change without notice.

**PRICE: \$400.00****TITLE: CALF PRODUCTION RECORDS****PUBLISHERS NAME: AGRICULTURAL MANAGEMENT AND ECONOMIC CONSULTING**

**DESCRIPTION:** The program allows the producer to store calf birth weights, birth dates, weaning weight, sire I.D., dam I.D. and age of dam. The program allows the producer to generate individual calf and herd performance statistics for 205 day adjusted weaning weights, 205 day adjusted average daily weight gains and adjusted nursing ratios using industry accepted formulas.

**PRICE: \$300.00****TITLE: CASH CROP PROJECTION****PUBLISHERS NAME: H.C.I.**

**DESCRIPTION:** Calculates cost of production per lb., bu., cwt, or ton as well as total costs per acre, profit per acre, break even yield and selling price. Also calculates break even cash rent and purchase price for land as well as future value of a crop.

**PRICE: \$240.00****TITLE: CATTLE FEEDING ECONOMICS****PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** Using the production cost of the cattle feeder, this program calculates the following: 1) the price that can be paid for feeder calves and earn desired return; 2) the necessary selling price to cover variable and total costs; and 3) a number of other costs such as: feed cost, non-feed costs, interest cost, etc.

**PRICE: \$49.95****TITLE: COMMERCIAL CATTLE FEEDING PROGRAM****PUBLISHERS NAME: HI-PLAINS SYSTEMS, INC.**

**DESCRIPTION:** This program has been designed to provide small and medium feedyards with a comprehensive and efficient record keeping system. The program will print feedbills, pen analysis,



final closeouts and accounts receivable. Interactive operator oriented posting of transactions. Easy to follow menus displayed on the video screen. Extensive error checking is done as data is entered. Feed, inventory, usage and purchases are an integral part of the basic feedlot program. Feedlot ration analysis. Reports are: Yard analysis, Yard sheet, Closeouts, Feed bills, Accounts receivable, Mill sheet, Daily summary, Details of daily transactions. This program is complemented by a comprehensive Users Guide along with customers support.

**PRICE: \$995.00**

**TITLE: COMPULIZE SYSTEM**

**PUBLISHERS NAME: H.C.I.**

**DESCRIPTION:** This is a field tested, easy to use fertilizer package.

- \* Formulates dry, liquid and suspension mixes.
- \* Calculated price/acre, price/ton, price/batch, and price for total blend formulation.
- \* Calculates chemical and/or trace element to batch.
- \* Prints an invoice.
- \* Prints a blend ticket.

- \* Deducts inventory on batch printed out.
- \* Calculates flood tip and pressure to apply liquid products.
- \* Quick change of products, prices, and formulation order.

**Soil Recommendation and Soil History Program**

- \* Immediate fertilizer and trace element recommendation for variable yield goals and crops.
- \* Storage of five-year crop history including crop, fertilizer applied, yield, etc., retrievable by farmer and field description.
- \* Printouts of recommendation, lab data, and pricing.
- \* Graphic display of nutrient levels on which recommendations are based.
- \* Pricing per acre of recommendations of several user changeable fertilizations.
- \* User has changeable factors to customize recommendations to local area.

**Mailing List, Payroll, and Word Processing**

- \* Checks and W-2s.
- \* Earnings Records.
- \* Tax Information.
- \* Employee list.
- \* Deductions.
- \* Payroll Register.
- \* Category Sort Function.
- \* Continual printout.

**Cash Crop Break even and Other Ag Programs**

- \* Calculates gross income, expense, net return, break even yields and selling price, based upon a quick entry routine of expense and operations to the cash crop.
- \* Calculates land rent and land price based on above inputs, a set net profit, and interest.
- \* Calculates effect of cash selling- vs- contract selling on net profit.

**Receivables, Inventory, and General Ledger**

- \* Write Purchase Order.
- \* Merchandise Received.
- \* Sales of Merchandise.
- \* Balance Sheet.
- \* Profit and Loss Statement.
- \* Customers Statement.
- \* Customer Credit Analysis.

**PRICE:**



**TITLE: COMPUTERIZED FARM ACCOUNTING SYSTEM (CFAS)**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** CFAS will provide data for enterprise management decisions and for tax management. And, no previous computer experience is needed to operate CFAS.

CFAS characteristics include:

1. Sixty-seven expense files and thirty-eight income files are predetermined for user ease and accuracy. CFAS will handle a maximum of 9000 yearly transactions.
2. CASH FLOW INFORMATION is available through budget comparisons with actual income and expenses as they occur.
3. Complete INCOME AND EXPENSE REGISTERS, including quantities, weights, etc., are stored and available on printout.
4. NET FARM INCOME STATEMENT for cash and accrual methods can be generated at any time. This report also gives totals for all income and expense files.
5. 1040FTAX FACSIMILE can be generated at any time to aid in tax planning.
6. BALANCE SHEETS, CASH FLOW, and PROFIT AND LOSS worksheets are provided to complete and compliment CFAS.
7. A complete DOCUMENTATION (approximately 100 pages) provides full instructions and sample data for practice using CFAS.

**PRICE: \$449.95**

**TITLE: COMPUTERIZED FARM RECORDS**

**PUBLISHERS NAME: MICRO LEARNINGWARE**

**HARDWARE REQUIREMENTS: Printer**

**DESCRIPTION:** The Farmware system provides the farming business with accurate and timely management information and eliminates the tedious processes associated with manual record keeping. The system is designed specifically for farmers and is not a re-worked business accounting system.

Farmware has most of the advantages of a full double entry accounting system without the confusing use of debits, credits, and journal entries. The double entry portion of the system simply involves maintaining a running cash balance by the computer. This running cash balance provides an excellent accuracy check in that the computer generated cash balance should always equal the actual checkbook balance.

The heart of the system is a "code file" maintained on diskette. There is an entry in this code file for each expense, income, capital purchase, and liability item for which management information is to be collected. This code file is tailored to the individual farmer's operation. Associated with the code number is a user assigned description and the amount budgeted for that item for the year.

Transactions are taken from the checkbook and deposit slips. Non-cash transactions are also accommodated.

A report showing all cash receipts with month-to-date and year-to-date figures along with year-to-date budgets. A similar report is available for cash expenses. Totals are printed by major and minor categories based on the type of code number. Also available are a status report of all capital purchases and liabilities and an income statement.

Farmware is very easy to operate. It is completely menu driven which means that the operator does not have to load and run programs. Programs are selected from a menu display on the screen. The operator is always given the opportunity to view each transaction before it is accepted by the computer. If it is incorrect, it may be changed or deleted before being accepted by the computer. The operator is also given the opportunity to

proof list on the printer and make corrections before transactions are posted to the permanent files. Even after they are posted, correcting entries are accommodated. Includes a 38-page detailed documentation booklet.  
**PRICE: \$99.00**

**TITLE: CORN HARVEST LOSSES**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** This program will calculate corn harvest losses and analyze them regarding the causes of those losses. This program goes hand-in-hand with Pm-574, "Profitable Corn Harvesting," available from the Cooperative Extension Service of Iowa State University.

**PRICE: \$49.95**

**TITLE: CORN VS. AN ALTERNATE CROP**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** This program will compare the economics of raising soybeans, or any other grain crop to the economics of raising corn. It looks at the variable cost of producing an alternate crop and calculates the necessary price to make that crop profitable. This program assumes that your fixed costs for either crop are the same.

**PRICE: \$49.95**

**TITLE: CORN/SOYBEAN MANAGEMENT SERIES ONE**

**PUBLISHERS NAME: HARRIS LABORATORIES, INC.**

**DESCRIPTION:** One diskette contains five different programs, each dealing with a specific area of crop management.  
Grain Storage Decisions

The program begins by calculating drying costs (if applicable). Then you enter simple background information such as grain price, number of bushels stored, months in storage, interest rate, moisture content, etc. The program then calculates the net crop value and the break even point after storage. By changing any of your inputs, you can create unlimited "what if" situations. For example, you can instantly determine the affect of an interest rate change on the cost of storage. Or you can calculate the affects of market changes or drying costs on the cost of storage. By changing these variables, it becomes easy to determine how much to store and when to sell for maximum profit.

The program also contains an easy-to-understand graph which shows at a glance the break even prices for on-farm and elevator storage for a whole range of different interest rates over a period of several months.

A printout of the program can also be made for a convenient permanent record of all your grain storage decisions.  
Harvest Loss Calculations

This program is designed to determine combine efficiency by calculating either corn or soybean losses at harvest.

By entering the number of rows per swath, row spacing, ears left behind the combine, number of ears on standing corn and loose kernels in front of and behind the combine, the program lets you calculate corn harvest losses in bushels per acre.

Color animated graphics are included to give you a clear picture of how to gather the important inputs. The program is an excellent troubleshooting device for detecting harvest problems before they create large field losses.

Crop Yield Calculator

This is an important program for estimating corn, soybean, wheat, oat, rye and barley yields. You begin by entering the length

and width of a given check strip. After entering pounds harvested and moisture content, the program then instantly computes the harvest yield and actual yield adjusted to standard moisture levels.

Yield calculations can then be used to make cash flow projections, schedule harvesting equipment, plan storage facility purchases, evaluate hybrid performances or for a variety of other purposes.

#### **Field Population Calculator**

This program lets you accurately measure plant stand population per acre for comparison with the actual population planted. This provides an excellent opportunity to evaluate hybrid performance, detect possible pest infestations such as rootworms and determine correct plant populations for optimum yields. A printout of the Field Population Calculator program can be kept as part of a permanent field history, too.

#### **Planter Calibration Calculator**

The task of figuring planter settings is made considerably easier with the help of the Planter Calibration Calculator program. All you have to do is enter row spacing and desired population of seed per acre. The program does the rest, calculating the planting rate of seeds per 20 feet of row, seeds per 10 feet of row and seeds per 5 feet of row. The program gives the right answer every time--accurately calculated so you can feel confident with your planter setting.

**PRICE: \$140.00**

#### **TITLE: COW-CALF PROFITABILITY**

##### **PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** This program looks at the profitability of the beef cow-calf enterprise for one production cycle. The output includes your break even cost per calf, return to capital, labor and management using your estimated selling price, and also gives you your cull cow adjustment factor per calf sold.

**PRICE: \$49.95**

**Early versions updated - Free of Charge**

#### **TITLE: CROP HISTORY**

##### **PUBLISHERS NAME: H.C.I.**

**DESCRIPTION:** Stores five years soil test data and cropping records per field. Can be used with the Soil Test Recommendation Program to automatically load the soil test data.

**PRICE: \$550.00**

#### **TITLE: CROP MANAGEMENT PACKAGE**

##### **PUBLISHERS NAME: FARMPLAN COMPUTER SYSTEMS, INC.**

**DESCRIPTION:** The Crop Package provides a comprehensive field-by-field, crop-by-crop management system. It creates crop budgets and cash flows, prints reports of resources required and used, and maintains records of field applications. The system also produces gross profit reports for each crop enterprise.

**PRICE: \$950.00**

#### **TITLE: CROP PRODUCTION**

##### **PUBLISHERS NAME: CHERRYGARH FARMS SOFTWARE, INC.**

##### **HARDWARE REQUIREMENTS: two disk drives**

**DESCRIPTION:** Will record income and expenses for corn, ear corn, soybeans, wheat and oats.

Income information takes grain sales, wet grain yield along with moisture test and from these, the dry grain yield, yield per



acre, and income per acre are calculated.

Expense items include direct and indirect costs along with specific fertilizer, herbicide and insecticide information. Direct cost information includes fertilizer cost, herbicide and insecticide cost, seed cost, machinery operation, interest, and miscellaneous expenses. Indirect costs include machinery depreciation, storage and drying, taxes, land management, return to land, and labor.

Fertilizer information monitors 3 separate applications for cost and lbs/acre. Herbicide and insecticide information does the same thing.

Information for each field is recorded individually. By dividing by the size of the field, it is possible to compare income and expenses per acre from one field to the next.

Designed to be used without prior computer experience.

**PRICE: \$150.00**

**TITLE: CROP YIELDS**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** This program will calculate the yield of crops based upon the number of pounds of grain harvested in a test area. The moisture percent of the harvested grain must also be known.

**PRICE: \$49.95**

**TITLE: CUSTOM MEAT PROCESSING SYSTEM**

**PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

**DESCRIPTION:** The Custom Meat Processing software keeps track of each customer's processing directions. A worksheet is printed to be used in the cutting and wrapping process. The number of packages and pounds of each cut can be recorded. Each customer can be given a report showing this information. Charge tickets are also printed.

Prices subject to change without notice.

**PRICE: \$1000.00**

**TITLE: CYBER-FARMER**

**PUBLISHERS NAME: CYBERIA, INC.**

**DESCRIPTION: FEATURES:**

- \*Records, sorts, combines and prints the results of the farm operation
- \*Account headings and numbers are pre-assigned for nearly every type of farm income or expense, but any account may be deleted, altered or added
- \* Keeps personal, family and household accounts as well.
- \*Cyber-Farmer management tools include cash-flow analysis, depreciation schedules, inventory and budget reports.
- \* No computer experience is necessary to operate this system.

**PRICE:**

**TITLE: DAIRY ENTERPRISE ANALYSIS SYSTEM**

**PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

**DESCRIPTION:** The Enterprise Analysis programs work together with the General Ledger data to help analyze the income and expenses for each enterprise. The reports show all expenses for an enterprise based on the units used in the sale of the product.

Examples: Expenses shown for a farrow to finish swine operation are based on hundredweight of pork produced. A grain enterprise may show all costs broken down as so much per bushel produced. The Swine Enterprise, Dairy Enterprise and Turkey Enterprise are presently available (11/30/82). Crop and other enterprise



systems will be available soon.

The Enterprise analysis Systems are part of an integrated software design that uses the data from the General Ledger System. Each enterprise has its own unique operational characteristics, therefore there is a need for each to be designed specifically to meet those differences.

The Dairy Enterprise Analysis programs help the user keep track of any and all expenses based on a hundredweight of milk produced. Income from both sale of milk and animals are extracted from the General Ledger System; feed costing and analysis are included.

Prices subject to change without notice.

**PRICE: \$500.00**

**TITLE: DAIRY HERD MANAGEMENT PACKAGE**

**PUBLISHERS NAME: FARMPLAN COMPUTER SYSTEMS, INC.**

**DESCRIPTION:** The Dairy Package System is designed to record detailed information about each cows production and breeding records. It can provide a wide range of reports and comparative information for herds up to 590 cows. Herd activity data can be entered weekly or monthly.

**PRICE: \$950.00**

**TITLE: DAIRY HERD MANAGEMENT SYSTEM**

**PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

**DESCRIPTION:** The Dairy Management software allows the dairyman to make better management decisions by providing information concerning production, health problems, and breeding problems for individual cows. Reports show which cows need special attention during the next week; calf information is also retained.

Prices subject to change without notice.

**PRICE: \$500.00**

**TITLE: DAIRY PRODUCTION**

**PUBLISHERS NAME: CHERRYGARTH FARMS SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: two disk drives**

**DESCRIPTION:** Offers information for the individual cow and also for the total herd. The records for the total herd are monthly expense entries including feed and direct costs.

Feed costs include corn, silage, hay, pasture, supplement, milk replacer, and a miscellaneous entry. Direct costs include veterinary and medicine costs, breeding costs, marketing expenses, power fuel, and equipment repair and miscellaneous costs.

Individual cow records keep track of monthly, year-to-date, and lifetime production, along with monthly and year-to-date milk income. Calf and cull cow sales are added with the milk sales to determine total income.

The total expenses are divided by the number of cows to determine the cost per cow. When matched with the income per cow the profit can be determined.

Breeding dates, heat dates, approximate and actual calving dates are recorded or computed. Complete calving information is kept on each cow.

Can be used by any dairy operation that wants both total herd and individual cow information.

**PRICE: \$200.00**

**TITLE: DAIRY, BEEF, AND SWINE RATIONS**

**PUBLISHERS NAME: H.C.I.**

**DESCRIPTION:** Calculates and formulates rations for respective classes of livestock based on NRC requirements. Prints rations and prices on a least-cost basis.  
**PRICE:** \$750.00

**TITLE:** DAY ADJUSTED WEANING WEIGHTS  
**PUBLISHERS NAME:** AG-COM

**DESCRIPTION:** The purpose of this program is to adjust weaning weights of calves so the performance of calves can help determine superior genetics in a beef cow herd. This program enables the use of estimated or known birth weights. A partial list of standard birth weight used by the respective breed organizations is given.  
**PRICE:** \$49.95

**TITLE:** DEPRECIATION LOG  
**PUBLISHERS NAME:** HARVEST COMPUTER SYSTEMS  
**HARDWARE REQUIREMENTS:** 132 column printer

**DESCRIPTION:** Keeps records of all depreciable items and calculates a depreciation schedule for them. Investment credit, investment credit recapture, and undepreciated value on disposed equipment are also calculated. Will automatically transfer the undepreciated amount of trade-ins to new items. Schedules can be printed on either IRS depreciation forms or plain paper. Designed for farm applications.  
**PRICE:** \$150.00

**TITLE:** ECONOMICS OF CORN PRODUCTION  
**PUBLISHERS NAME:** AG-COM

**DESCRIPTION:** The purpose of this program is to help the user calculate his corn production costs. Output is broken down, into variable cost per bushel, fixed cost per bushel, and total cost per bushel. The program also gives return to labor, capital and management at estimated selling prices.  
**PRICE:** \$49.95

**TITLE:** F.A.R.M.  
**PUBLISHERS NAME:** AURORA SYSTEMS, INC.  
**HARDWARE REQUIREMENTS:** two disk drives and 80 column printer

**DESCRIPTION:** Farm record-keeping package, including Accounting, Tax, and Records Management. Provides extensive reporting of cash flows, budgets, tax information, and money borrowed. Easy editing of transactions.  
**PRICE:** \$295.00

**TITLE:** FARM ANALYST  
**PUBLISHERS NAME:** HARVEST COMPUTER SYSTEMS

**DESCRIPTION:** Tells you how much money you are making and if it is enough to service debts. In addition, helps identify your business's strengths and weakness. Income and expense input can be entered automatically from files created by Farm Ledger and Depreciation Log or by the user if those programs are not available. Beginning-of-year and end-of-year inventory, accounts, and notes are entered by the user. An Income Statement shows both cash and accrual gross income, expenses, and earnings. An Accuracy Report tells you how reliable your records are to prevent making decisions based on bad information. Earnings Analysis examines the productivity, costs, profitability, capitalization, and risk of your business in

detail. The documentation manual explains all analysis to help you interpret the output.

**PRICE: \$50.00**

**TITLE: FARM LEDGER**

**PUBLISHERS NAME: HARVEST COMPUTER SYSTEMS**

**DESCRIPTION:** A bookkeeping system designed specifically for farmers. Modified single-entry accounting allows easy-to-understand entry of income and expense items using categories like "FRET" and "CHEM" instead of account numbers. Unlike typical single-entry systems in which cashed checks and expenses paid by cash can be forgotten and lost, Farm Ledger "follows through" on cash entries, automatically making offsetting entries to keep you in balance. Eighteen income and 32 expense categories are available for categorizing entries. All categories can be user-defined by name, type of category, and whether or not the user wishes to use quantity inputs. Checks can be written on your printer as entries are made. A check balancing routine is included.

Reports include month and year-to-date totals for each category; individual entry report listing individual entries selected by category, person paid, or descriptions; resale report of taxable resale income to date, deductible resale purchases, and resale purchases not yet deductible; account report of loan and savings account transactions and balances; check register of all checks and deposits.

Farm ledger files interface with Farm Analyst and other Harvest Computer Systems accounting program to give you a complete analysis of your farm's profitability, strengths, and weaknesses.

**PRICE: \$250.00**

**TITLE: FARM MANAGEMENT DECISIONS**

**PUBLISHERS NAME: DECISION DATA, INC.**

**DESCRIPTION:** Five programs are provided on this disk which provide information required for decisions related to equipment purchases, grain sales and land purchases.

a. **EQUIPMENT DECISIONS:** Provides an evaluation of the costs associated with various types of farm machinery. The cost of operation of tractors, implements or a combination of the two can be estimated. Costs are calculated in dollars per year, per hour and per acre. Program parameters are based on information from Iowa State University and the American Society of Agricultural Engineers.

b. **GRAIN SELLING DECISIONS:** This program allows you to evaluate the costs involved in storing grain. The outputs allow you to determine the prices needed to cover interest, drying and storage costs.

c. **ANNUAL COST OF OWNERSHIP:** this program quickly allocates the various types of costs associated with the ownership of building, breeding stock inventory, machinery and land. The costs are the summarized and can be allocated to various production units.

d. **LAND PURCHASE ANALYSIS:** Allows you to evaluate the cash flow required for the payment of a tract of farm land.

e. **GRAIN INTEREST COSTS:** This program allows you to quickly determine the interest costs per bushel per month of storing grain.

**PRICE: \$59.95**

**TITLE: FARM RECORDS**

**PUBLISHERS NAME: AGRICULTURAL MANAGEMENT AND ECONOMIC CONSULTING**

**DESCRIPTION:** This single entry bookkeeping system which includes the following integrated programs:

**Income/Expense-** Tabulates income and expense transactions, provides an audit trail and prints a profit/loss statement.

**Depreciation-** Provides a summary of machinery purchases and sales and calculates investment tax credit and depreciation.

**Net Worth-** Maintains a list of assets and liabilities and prints a net worth statement.

**Tax Forecaster-** Calculates your present Federal Tax liability and simulates the effect of raising or lowering income and expenses.

**Loan Amortizer-** Calculates loan payments, interest rates, repayment periods and loan amounts.

**PRICE: \$225.00**

**TITLE: FARMCALC W/MODELS**

**PUBLISHERS NAME: FARMPAN COMPUTER SYSTEMS, INC.**

**DESCRIPTION:** Farmcalc is a series of microcomputer program "models" designed to run on the electronic worksheet VISICALC. Farmplan has created the models for you, the Farmer, to be able to put them to work immediately, but also tailor the models to meet your exact specifications.

**PRICE: with models \$350.00**

**Models only \$150.00**

**TITLE: FARMER'S WORKBOOK**

**PUBLISHERS NAME: CYBERIA, INC.**

**DESCRIPTION:** Combines the power of Visicalc with the knowledge of a major midwestern university. A collection of templates that are designed to be run on the Visicalc program. the templates include labels, formulas, sample data, test cases and full documentation. Template titles include: Cattle Feeder, Pig Production, Sheep Production, Grain Management, Loan Payments, Market Average, Land Purchase and many others.

**PRICE:**

**TITLE: FARMFILER W/MODELS**

**PUBLISHERS NAME: FARMPAN COMPUTER SYSTEMS, INC.**

**DESCRIPTION:** Farmfiler is a general purpose record filing system that allows you to manipulate and retrieve data with remarkable flexibility. With Farmfiler you decide what information you want to keep, what calculations you want and which reports you want generated.

**PRICE: \$225.00**

**TITLE: FARROW-TO-FINISH SWINE PRODUCTION**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** This program will analyze the farrow-to-finish operation. It will calculate the necessary price to cover fixed and variable costs, profits, return to management, returns to capital and labor, etc.

**PRICE: \$49.95**

**TITLE: FEEDER**

**PUBLISHERS NAME: AGRICULTURAL MANAGEMENT AND ECONOMIC CONSULTING**

**DESCRIPTION:** Evaluates the cattle feeding decision. The program calculates the cost per pound of gain, break even selling and purchasing price, and net return.

**PRICE: \$50.00**



**TITLE: FEEDER PIG PRODUCTION****PUBLISHERS NAME: AG-COM**

DESCRIPTION: This program will analyze the production of feeder pigs for sale. It will calculate necessary prices to cover fixed and variable costs, profit and return to management, etc.

**PRICE: \$49.95****TITLE: FERTILIZER FORMULATION****PUBLISHERS NAME: AG-COM**

DESCRIPTION: This program is designed for the farmer or fertilizer supplier. It will formulate the pounds and cost of a product that must be applied to achieve the pounds of actual nutrients desired. The six most common dry and liquid fertilizers are used.

**PRICE:****TITLE: FERTILIZER RECOMMENDATIONS PACKAGE****PUBLISHERS NAME: FINANCIAL SYSTEMS, INC.**

DESCRIPTION: Professional Fertilizer Recommendations-

- \* Immediate recommendations, even if crop and/or yield are changed.
- \* Independent recommendations based upon Harris Laboratories data bank.
- \* Recommendations from numerous universities can be included.
- \* Special programs and recommendations from selected companies can also be included.

Localized Fertilizer Recommendations

- \* Your own program, completely under your control.
- \* Calculated from your selection of any professional recommendations as the basis.
- \* Easy to change and/or update.

**PRICE: \$700.00****TITLE: FIELD & CROP RECORDS SYSTEM****PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

DESCRIPTION: The Field & Crops Records software allows the user to keep track of practically everything that happens to each field and resulting crop. In addition to the information about fertilizer, chemicals, hybrid planted, rainfall, yield, etc. are other important data such as use of certain implements, grain storage inventories, and field notes.

Prices subject to change without notice.

**PRICE: \$1500.00****TITLE: FIELD POPULATION****PUBLISHERS NAME: AG-COM**

DESCRIPTION: This program will: 1) Calculate the plant population of a field based upon the number of plants in a test area. 2) Calculate the number of plants needed per ten feet of row to achieve a given population.

**PRICE: \$49.95****TITLE: FIELD SIZE****PUBLISHERS NAME: AG-COM**

DESCRIPTION: This program will: 1) Calculate the size of rectangular fields based upon length and width measurements. 2) Calculate the width of field needed to obtain a field of a given number of acres.

**PRICE: \$49.95**

**TITLE: FINANCIAL UTILITIES**

**PUBLISHERS NAME: FARMPLAN COMPUTER SYSTEMS, INC.**

**DESCRIPTION:** This program contains 9 procedures used in common business practice. Each procedure is easy to use and completely menu driven. You can quickly make changes to any entry and evaluate the resultant effect on its calculations. When satisfied with the calculated results you can print data quickly and easily.

**PRICE: \$225.00**

**TITLE: FINISHING FEEDER PIGS**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** This program will analyze the purchasing and finishing of feeder pigs as to profitability, and prices needed to cover fixed costs, variable costs, profit and return to management, etc.

**PRICE: \$49.95**

**TITLE: GENERAL LEDGER SYSTEM**

**PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

**DESCRIPTION:** The General Ledger is a double entry accounting system that produces a Balance Sheet, Profit and Loss Statement, General Ledger Listing of all transactions by account code and a Trial Balance each month. With this software the user, who understands double entry bookkeeping, can easily design the account code structure for any type of business. As many as 250 account codes and 400 transactions per month can be used. This is the central program module of an integrated system sharing its data with the Budgeting System and Enterprise Analysis Systems. Prices are subject to change without notice.

**PRICE: \$600.00**

**TITLE: HOG FARROWING PROJECTION**

**PUBLISHERS NAME: H.C.I.**

**DESCRIPTION:** Calculates cost of production per feeder pig, projected profit per pig, profit per litter, profit for group of sows, break even feeder pig price, break even weaning number, and break even purchase price for sows.

**PRICE: \$240.00**

**TITLE: HOG MANAGEMENT PACKAGE**

**PUBLISHERS NAME: HARVEST COMPUTER SYSTEMS**

**DESCRIPTION:** User-oriented input is structured around the natural events of hog production. Sows, boars, and pens can be identified by either names or numbers. User-defined management options and performance observations can be entered for any pen. Reports are available on monthly breedings, farrowings, weaning, and removals from nursery or finishing pens. These reports provide turn around time, death loss, average gain per day, etc. A sow performance index is calculated in the Monthly Report to give you a concise measuring stick for comparing sows. The Ranking Report lists sows, boars, or pens according to ranking criteria you choose. Sow/Boar history provides a summary of an animal's lifetime productivity. The Selection Report gives you a list of sows, boars, or pens with performance equal to, greater than, less than, or not equal to any criteria you choose.

**PRICE: \$200.00**

**TITLE: HOG PRODUCTION****PUBLISHERS NAME: CHERRYGARTH FARMS SOFTWARE, INC.**

**DESCRIPTION:** Can be used for farrow to finish hog production or for raising feeder pigs.

Total herd record entries focus on monthly expenses for the total herd which are divided by the number of sows to determine the expense per sow. Income is recorded from individual sows and when matched against expenses, profitability can be determined. Feed expenses include corn, other grain, pasture, hay, supplement, pig creep, and other miscellaneous feed. Direct costs include veterinary and medicine, breeding costs, marketing expense, power, fuel, and equipment repair, and miscellaneous costs.

Individual sow records keep track of litter, yearly, and lifetime pig production. Breeding dates, heat dates, approximate and actual farrowing dates, veterinary problems, farrowing ease, sire of pigs, and litter history are some of the birthing information recorded. Income from market hog and cull sow sales is entered here and totalled into the total herd records.

**PRICE: \$200.00****TITLE: LEAST COST RATION FORMULATION****PUBLISHERS NAME: FARMPPLAN COMPUTER SYSTEMS, INC.**

**DESCRIPTION:** The LCR Package allows anyone to develop least cost rations immediately. It is applicable to any animal operation and you define the parameters. Simply enter commonly used feeds with their prices and analyses. Next enter nutritional requirement to be met and in minutes you have a least cost ration.

**PRICE: \$550.00****TITLE: LIMING SOIL****PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** The results of a soil test plus the analysis of ag lime material are used to determine the number of pounds of ag lime material needed on a given soil.

**PRICE: \$49.95****TITLE: LIQUID MANURE AND FERTILIZER****PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** This program uses soil test results and the results of analysis of liquid manure to determine the amount of liquid manure to be applied to the soil and the amount of commercial fertilizer still needed.

**PRICE: \$49.95****TITLE: LIVESTOCK BREAKEVEN ANALYSIS****PUBLISHERS NAME: DECISION DATA, INC.**

**DESCRIPTION:** Two sets of programs are provided on this disk. They are designed to estimate the break even sales prices needed to cover feed, labor, and fixed costs of feeding cattle and hogs.

**1. CATTLE BREAK EVEN ANALYSIS:** This program can be used to determine (1) the value of marketing grain through cattle, (2) the break even price needed to cover production costs, and (3) the maximum price that can be paid for feeder cattle given expected fat cattle prices. It provides this information for (1) steer calves, (2) heifer calves and (3) yearlings on several different rations.



**II. SWINE BREAK EVEN ANALYSIS:** This program is useful for determining (1) the value of feeding corn to hogs, (2) the break even prices for market hogs and (3) the prices that can be paid for feeder pigs given future market prices. It provides break even costs for (1) farrow to finish operations, (2) farrowing and producing 40 pound feeder pigs and (3) buying 40 pound feeder pigs and selling them at market weight.  
**PRICE: \$59.95**

**TITLE: MACHINERY MANAGEMENT SERIES ONE**

**PUBLISHERS NAME: HARRIS LABORATORIES, INC.**

**DESCRIPTION:** Single diskette contains four different programs dealing with a specific area of machinery management.

**Operation Cost Estimations**

By entering basic inputs about virtually any piece of machinery used in agriculture, AgDisk can quickly determine costs per year, cost per hour and cost per acre for depreciation, interest, taxes, insurance, housing, fuel and lubrication, labor and repair. Then total fixed costs and total variable costs are calculated. You can also change any of your inputs to create "what if" buying situations. For example, you can calculate the change in operating costs by substituting various figures for horsepower ratings, years of ownership, fuel types or interest rates. The program also contains an easy-to-read graph that illustrates how operating costs change as machinery use increases. A printout of the Operation Cost Estimations program can be made for a permanent record of projected machinery costs. The printout can also be an excellent tool when establishing a line of operating credit with your lender.

**Lease/Buy Comparison**

You simply enter basic purchase and depreciation information. Then AgDisk quickly calculates the cost of purchasing equipment. Basic lease information is also entered and calculated. The program compares the cost of purchasing equipment side-by-side with the cost of leasing. The difference in cost is also calculated to give you the facts you need to assess your options. This program provides an excellent opportunity to create "what if" situations by inputting different variables such as tax credits, depreciable life or down payments. You can then determine what adjustments might be made to make either buying or leasing more advantageous.

**Ownership/Hire Comparison**

This program is designed to give you the facts you need when deciding whether to invest in equipment or custom hire. You enter basic information such as your estimated ownership operating costs (obtained from other programs on this diskette), custom hire costs, estimated acres covered and general tax bracket.

The program quickly calculates the cost of ownership per year and per acre, less tax savings, and total cost of custom hiring on the same. Then a side-by-side comparison shows which is more expensive. Printed reports of the Ownership/Hire Comparison program may also be made for a permanent record.

**PRICE: \$140.00**

**TITLE: NET ENERGY FOR FEEDLOT CATTLE**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** The purpose of this program is to enable the user to evaluate the performance potential of the energy available in a given ration. It then estimates expected average daily gain in pounds per day based on the net energy system developed by Iofgreen and Associates.



**PRICE: \$49.95**

**TITLE: PIG PACKAGE**

**PUBLISHERS NAME: FARMPLAN COMPUTER SYSTEMS, INC.**

**DESCRIPTION:** The Pig Breeding Management Package has been designed to keep accurate records while providing timely, easy-to-use reports and herd evaluations information. It is configured to keep current records and statistics for a herd of 60 boars and 600 sows with a maximum of 10 litters each.

**PRICE: \$950.00**

**TITLE: PROTEIN BALANCING FOR FEEDLOT CATTLE**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** The purpose of this program is to evaluate the metabolizable protein available in a given ration and determines the amount of supplemental protein required for feedlot cattle.

**PRICE: \$49.95**

**TITLE: SEED CORN DEALER'S SYSTEM**

**PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

**DESCRIPTION:** The Seed Corn Dealer's software is an accounts receivable system which prints out the invoices each month. Several discount methods are built into the program. The dealer can implement his own finance charges if he desires; other reports include ageing reports, and customer lists. The invoices are presently printed on Pioneer Seed's four part invoice forms. The programs can be modified to print invoice forms from other seed companies.

Prices subject to change without notice. Pioneer is a trademark of Pioneer Hi-Bred International, Inc.

**PRICE: \$1000.00 to \$1500.00**

**TITLE: SELLING WET CORN VS. DRY**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** This program compares: 1) selling wet corn at harvest, 2) selling dry corn at harvest, 3) drying corn and storing, as to potential profitability.

**PRICE: \$49.95**

**TITLE: SHEEP PRODUCTION ECONOMICS**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** With the economic cycles of various livestock production enterprises, many producers are becoming interested in sheep production. After inputting your estimated costs, this program will calculate: the break even selling price of lambs; the return to labor, capital and management; and various other costs and returns.

**PRICE: \$49.95**

**TITLE: SOIL TEST RECOMMENDATION**

**PUBLISHERS NAME: H.C.I.**

**DESCRIPTION:** Calculates optimum fertilizer rates based on soil test data and your crop and yield goal. also gives comparative pricing of alternate application methods.

**PRICE: \$2500.00**

**TITLE: SOYBEAN HARVEST LOSSES**

**AG-18**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** Pm-573 "Profitable Soybean Harvesting", available from the Iowa State University Cooperative Extension Service, is the basis of this program which will determine the source and amount of soybean harvest losses.

**PRICE: \$49.95**

**TITLE: SWINE ENTERPRISE ANALYSIS SYSTEM**

**PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

**DESCRIPTION:** The Enterprise Analysis programs work together with the General Ledger data to help analyze the income and expenses for each enterprise. The reports show all expenses for an enterprise based on the units used in the sale of the product.

**Examples:** Expenses shown for a farrow to finish swine operation are based on hundredweight of pork produced. A grain enterprise may show all costs broken down as so much per bushel produced. The Swine Enterprise, Dairy Enterprise and Turkey Enterprise are presently available (11/30/82). Crop and other enterprise systems will be available soon.

The Enterprise analysis Systems are part of an integrated software design that uses the data from the General Ledger System. Each enterprise has its own unique operational characteristics, therefore there is a need for each to be designed specifically to meet those differences.

The Swine Enterprise Analysis software for farrow to finish operations allows the user to keep track of any expense and the total expense based on hundredweight of pork produced. Feed costing and nutrient analysis is included for the producer who makes his own feed.

Prices subject to change without notice.

**PRICE: \$500.00**

**TITLE: SWINE RATION ANALYSIS**

**PUBLISHERS NAME: AG-COM**

**DESCRIPTION:** The purpose of this program is to compare the 1979 NRC swine nutrient requirements to the calculated analysis for a given swine ration. This program analyzes crude protein, calcium, and phosphorous. A standard swine complete protein supplement, which is used in this program summarizes common swine protein supplements sold by four Iowa-based feed companies.

**PRICE: \$49.95**

**TITLE: SWINE MANAGEMENT SYSTEM (B.O.A.R.S.)**

**PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

**DESCRIPTION:** Our Swine Management Software, which is called the Breeding Optimization And Recordkeeping System (B.O.A.R.S.), will be demonstrated in March (83) for the sixth consecutive year at the American Pork Congress in St. Louis. We believe it to be the most comprehensive, easiest to use swine management software available on any computer today, regardless of size. Different versions are available to fit varying management techniques and facility design.

Prices subject to change without notice.

**PRICE: \$1500.00 to \$2500.00**

**TITLE: THE CALENDAR**

**PUBLISHERS NAME: HARVEST COMPUTER SYSTEMS**

**DESCRIPTION:** An electronic tickler file designed to help you schedule and monitor upcoming events and work tasks. It can be used for a wide variety of tasks, including office management,

livestock breeding, and to remind you of birthdays, tax dates, and due dates of bills. A special input feature is the standard event schedule, a pre-defined list of event names and day relationships which can be set up by the user to automatically control input. Any section of the calendar can be printed out at any time. A print out of all entries for a given identifier can also be obtained.

**PRICE: \$50.00**

**TITLE: TURKEY ENTERPRISE ANALYSIS SYSTEM**

**PUBLISHERS NAME: COMPUTERIZED FARM INFORMATION SYSTEMS, INC.**

**DESCRIPTION:** The Enterprise Analysis programs work together with the General Ledger data to help analyze the income and expenses for each enterprise. The reports show all expenses for an enterprise based on the units used in the sale of the product.

**Examples:** Expenses shown for a farrow to finish swine operation are based on hundredweight of pork produced. A grain enterprise may show all costs broken down as so much per bushel produced. The Swine Enterprise, Dairy Enterprise and Turkey Enterprise are presently available (11/30/82). Crop and other enterprise systems will be available soon.

The Enterprise analysis Systems are part of an integrated software design that uses the data from the General Ledger System. Each enterprise has its own unique operational characteristics, therefore there is a need for each to be designed specifically to meet those differences.

The Turkey Enterprise Analysis programs are designed for both breeder flocks and commercial flocks. Any expenses can be shown based on a per egg basis or a per pound basis, respectively. Specific flock data is retained to help with the comparison of flocks. Examples include condemnation information, mortality, and percentage of fertile eggs.

Prices subject to change without notice.

**PRICE: \$500.00**

**TITLE: VISICALC AGRI-DATA**

**PUBLISHERS NAME: THE COMPUTER CENTER**

**DESCRIPTION:** Visicalc, a program designed to turn your computer into a problem solving tool, has also come up with a very useful farm management software program. Visicalc was born with the observation that many problems are frequently solved with a calculator, a pencil and a sheet of paper; three nearly universal tools. Calculating farm budgets, income taxes, cost estimates and sales projections are all outlined in this program.

**PRICE: \$150.00**

**TITLE: WORKSHEET**

**PUBLISHERS NAME: HARVEST COMPUTER SYSTEMS**

**HARDWARE REQUIREMENTS: VisiCalc**

**DESCRIPTION:** A set of VisiCalc models designed for farming. Models include cash rent analysis, land purchase analysis, feeder pig and feeder cattle analysis, cash flow, farrow-to-finish hog plan, grain marketing plan, grain marketing analysis, bin volume, seed population, and more.

**PRICE: \$50.00**

## APPLE III

Apple made some mistakes in its development and introduction of the Apple III, but the biggest mistakes are now being made by the folks who overlook this incredible machine when deciding on hardware buys. The Apple III is now reliable, powerful, and useful.

This section details a growing list of programs that enhance the Apple III's ability to solve problems from your desktop. Most of these programs bear little relationship to what you're accustomed to seeing on smaller microcomputers in that they're so much more capable and faster.

The SOS operating system is a dream to work with and Apple has thoughtfully provided a good package of utilities to complement SOS.

If you already own an Apple III, there's probably at least one program in this section that should be on your buy list. If you don't yet have an Apple III, this section should give you dozens of reasons why you need one.

Al Tommervik  
Softalk Magazine



# APPLE III

APPLE ACCESS III . . . . .	APIII-1
APPLE BUSINESS BASIC . . . . .	APIII-2
APPLE III BUSINESS GRAPHICS . . . . .	APIII-4
APPLE III COBOL . . . . .	APIII-4
APPLE III PASCAL . . . . .	APIII-5
APPLE III RECORD PROCESSING SERVICES (RPS) . . . . .	APIII-6
APPLE III SOPHISTICATED OPERATING SYSTEM (SOS) . . . . .	APIII-7
APPLE SOFTCARD III SYSTEM . . . . .	APIII-8
BANKER'S CONSTRUCTION LOAN REPORTER . . . . .	APIII-8
BUDGET MODEL . . . . .	APIII-8
COMMERCIAL ACCOUNT PROFITABILITY ANALYSIS . . . . .	APIII-9
COMPUTER CASES . . . . .	APIII-9
CONJOB . . . . .	APIII-9
CONSTRUCTION BOOKKEEPER . . . . .	APIII-10
CONSTRUCTION MATERIAL LIST GENERATOR . . . . .	APIII-10
COST ACCOUNTANT . . . . .	APIII-10
CYTRON MASTERS . . . . .	APIII-10
DATA BASE III . . . . .	APIII-11
DATA MANAGER FOR WEATHER OBSERVATIONS . . . . .	APIII-11
DESKTOP/PLAN . . . . .	APIII-12
EASY (EXECUTIVE ACCOUNTING SYSTEM) . . . . .	APIII-12
GALACTIC GLADIATORS . . . . .	APIII-13
GL-PLUS . . . . .	APIII-13
GUADALCANAL CAMPAIGN . . . . .	APIII-14
HURRICANE TRACKING PROGRAM . . . . .	APIII-15
INDIVIDUAL U.S. INCOME TAX PACKAGE . . . . .	APIII-15
JOB CONTROL SYSTEM . . . . .	APIII-16
JOB SCHEDULING . . . . .	APIII-16
LEXICHECK . . . . .	APIII-17
MAIL LIST MANAGER . . . . .	APIII-17
MAIL LIST MANAGER INTERFACE . . . . .	APIII-19
MEDICAL CLINIC . . . . .	APIII-20
MEMOMINDER . . . . .	APIII-20
MULTI-YEAR PLANNING MODEL . . . . .	APIII-21
PAYROLL MODULE . . . . .	APIII-21
PHD . . . . .	APIII-21
PROFILE . . . . .	APIII-22
QUICK & EASY DATA MASTER . . . . .	APIII-24
QUICK FILE III . . . . .	APIII-24
REPORT WRITER . . . . .	APIII-25
S.E.U.I.S. . . . .	APIII-25
SALES ORDER ENTRY III . . . . .	APIII-26
SCRIPT III . . . . .	APIII-26
SERVICE CHARGE ANALYSIS AND PRICING MODEL . . . . .	APIII-27
SMART . . . . .	APIII-27
SOSCLOCK III . . . . .	APIII-29
SUPERPLOT . . . . .	APIII-29
SURVEYOR'S AIDE . . . . .	APIII-29
THE AGRICULTURAL SOFTWARE PACKAGE . . . . .	APIII-29
THE APPLE III INFORMATION ANALYST . . . . .	APIII-33
THE APPLE III WORD PROCESSOR . . . . .	APIII-35
THE COSMIC BALANCE . . . . .	APIII-36
THE HARDISK ACCOUNTING SERIES . . . . .	APIII-37
TRANSCRIBE . . . . .	APIII-38
TYPEFACE . . . . .	APIII-39
VERSA FORM . . . . .	APIII-40
VISICALC III . . . . .	APIII-42
VISISCHEDULE . . . . .	APIII-44
WORD III . . . . .	APIII-44
WORD JUGGLER . . . . .	APIII-45
WORD PAINTER . . . . .	APIII-46
WORD WEAVER II . . . . .	APIII-48

## **TITLE: APPLE ACCESS III**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Now you can use your Apple III to tackle stand-alone and timesharing tasks as well. Access III transforms your Apple III into a conversational terminal that can communicate with a variety of computers and timesharing systems, providing you with time- and money-saving desktop control.

This powerful program allows your Apple III to emulate Digital Equipment Corporation's popular VT-100 and VT-52 terminals. It even enables you to hook up your computer to remote information services - including the Dow Jones New/Retrieval Service and The Source - making a wide range of highly useful programs, data bases, and financial information available to you.

Tired of waiting for data processing services to get around to your top priority jobs? Using an Apple III, you can complete the work according to your schedule, then transmit the information with Access III to mainframe or minicomputers systems directly or via telephone link. By connecting a modem to your Apple III's built-in RS-232 interface, you can communicate at 110, 300, 1200, 2400, 4800, or 9600 baud.

The Apple III's local processing power gives you the added advantage of being able to "download" data from remote systems and work with it off-line, significantly cutting your timesharing charges and total computing costs.

### **APPLE ACCESS III:**

- \* allows you to upload and download files to and from other Apple systems, as well as larger computers, expanding your communications capabilities;
- \* offers a cost-effective timesharing alternative, because it lets you process downloaded data off-line, at your own pace;
- \* allows you to revise recorded data by using your Apple III Pascal Editor, giving you added flexibility;
- \* provides auxiliary keypad codes compatible with VT-52 and VT-100 Application Mode sequences, facilitating data input;
- \* offers four programmable function "PF" keys, allowing you to communicate more effectively with remote computers.

By using Access III's SET-UP MENU, you define communication speed and other parameters affecting data transmission. Access III offers full 80-column, upper/lower case display.

The SET-UP MENU lets you select either normal or inverse text modes. Simple commands allow you to save menu constants to your data diskette and load them quickly for repeated use.

Apple Access III's main menu offers five options. Terminal Mode provides you with the necessary environment for communicating with remote computers.

If you're using a modem, simply turn it on and dial the host computer; if you have a direct connection, you should immediately be on-line. (Information and timesharing services generally will prompt you for a password and account number before you can log on to their systems.)

Access III's powerful Recording Mode feature allows you to selectively save host-transmitted data to your data diskette or printer. You can take advantage of it by entering a simple command. If you're recording more than one file, Access III's Change the Name of the Recording File option lets you organize the data into separate files on your diskette and output any of the host files directly to your printer.

Transmit a File allows you to quickly transfer any type of file to remote computers. ASCII files developed using your Apple III Pascal Editor will appear to the remote computer exactly as if you had typed them on your keyboard.

The program's handy HELP option displays all the Access III commands available in Terminal Mode, as well as the name of the recording file currently open and active. Exit automatically

"logs off" your Apple III and terminates the program.  
**PRICE: \$150.00**

**TITLE: APPLE BUSINESS BASIC**  
**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Apple Business BASIC for the Apple III Computer System is one of the most powerful versions of BASIC ever developed for a microcomputer. Designed for those who want the flexibility, power, and ease-of-use of the popular BASIC language, Apple Business BASIC incorporates a number of innovative features which can be used to satisfy some of the most demanding business and scientific programming needs.

With Apple Business BASIC, programmers can address over 70K bytes of extended memory - the largest workspace available on any personal computer. In addition, Apple Business BASIC's special 64-bit, 18-digit data type handles the toughest accounting chores with "penny accuracy".

For producing reports, Apple Business BASIC offers some of the most comprehensive and flexible formatted output capabilities found on any version of BASIC - even those used on large system mainframes. Apple Business BASIC also features advanced file handling, with flexible file formats to match application needs; 16-bit binary integer, and 32-bit binary floating point data types; 64-character variable names (all characters significant) for documentation purposes; easy access to a wide variety of plug-in peripherals or auxiliary devices; and a trace mode for debugging.

If you prefer programming in BASIC, but require more power, flexibility, and precision than most BASIC's can give you, turn to Apple Business BASIC for the Apple III - an advanced language for an advanced computer system. Apple Business BASIC is supplied with all Apple III system configurations.

APPLE BUSINESS BASIC...

- Makes it easier to generate reports, because of its flexible, extensive, formatted output capabilities, and versatile PRINT USING and IMAGE statements...

- Increases system efficiency, because its large, user-available workspace (over 70K bytes) allows lengthy programs to be kept in memory...

- Adds programming flexibility, because it lets you keep multiple (up to 10) files open simultaneously, with virtually no size constraints...

- Allows you to display and calculate financial accounting data with "penny accuracy", through the use of a 64-bit, 18-digit data type and special functions...

- Speeds up disk file storage, because its built-in facilities let programs read and write files more efficiently...

- Simplifies system input/output (I/O) control, because just a few key words let you control a wide variety of peripherals, as well as machine language routines and graphics facilities...

- Aids development and debugging of complex programs, because its optional ELSE statement and automatically indented listings encourage a structured approach to programming.

Apple Business BASIC is a general-purpose, problem solving language, designed especially for business and scientific applications calling for: 1) an easy-to-use debugging environment; 2) fast high precision operations - such as accounting - on numbers with a range less than  $\pm 10 \times 18$ ; 3) a high degree of output formatting for printing reports; and 4) greater flexibility for file I/O operations. Apple Business BASIC's powerful features provide the programmer with a number of advanced capabilities and conveniences.

EXTENDED USER PROGRAM MEMORY SPACE



In an Apple III Computer System with 128K bytes of RAM, Apple Business BASIC presents you with a huge, 70K byte workspace - more than is available with any other personal computer BASIC. This means you can write large programs more easily and run them more efficiently. Access time is reduced, because large files can be kept in memory - instead of on disk - and because many files can be opened for access simultaneously. In addition, large, high-resolution graphics areas can be used without fear of unduly restricting program size.

#### FLEXIBLE OUTPUT FORMATTING

Apple Business BASIC's versatile PRINT USING and IMAGE statements allow you to use a variety of format strings to prepare reports. Specifications are extremely flexible, and include string, literal, digit, scientific notation, and engineering notation categories.

#### ADVANCED FILE HANDLING

In Business BASIC, file handling is done through numbered file references defined within the program: You can make these file definitions perform chores simply by using generic terms. To print, for example, call out the generic term "printer" within the program. Apple Business BASIC works with the Apple III's Sophisticated Operating System (SOS) to handle the details automatically, including which printer you're addressing (if your system has more than one), its I/O address, etc. For greater user convenience, disk files are referenced by directory, sub-directory, and file name, without regard to the storage device on which the file resides.

#### LONG VARIABLE NAMES

Apple Business BASIC allows you to use variable names (up to 64 characters in length) for documentation purposes, with each character-significant. Furthermore, because spaces are used as delimiters, embedded BASIC keywords are allowed in variable names, permitting even more flexibility.

#### "STRUCTURED" BASIC FEATURES

With Apple Business BASIC, you can add the ELSE statement to the usual IF...THEN statement provided by BASIC. And your ELSE clauses can themselves contain other IF...THEN...ELSE constructs. Apple Business BASIC also provides a LISTING feature that automatically indents the contents of FOR...NEXT loops. These "structured" BASIC features encourage programmers to use a more logical, structured approach to developing their programs, and greatly aid development and debugging of complex programs.

#### POWERFUL INTERFACE TO ASSEMBLY LANGUAGE

Because Apple Business BASIC runs in the SOS environment, you don't have to worry about memory management, buffer allocation, or file handling. This freedom will save you a significant amount of programming time.

Additionally, Apple Business BASIC relates to SOS through a powerful Invoke/Perform interface mechanism. For example, if you have created assembly language routines using the disk assembler, you can specify the assembled routine by name in an Apple Business BASIC program. Once the routines are mentioned in the "INVOKED" statement, Apple Business BASIC works with SOS to find a residence in memory for the routines, and to establish - as entry points in the resultant linked module - any function or procedure names mentioned in the routines. All you have to do is PERFORM the previously invoked routine - specifying any variables to be passed - and Apple Business BASIC and SOS automatically handle all the operation details.

Apple Business BASIC makes life a lot easier for programmers by expanding system capabilities, reducing program development time, and adding greater flexibility to formatted output and file handling facilities.

Computer Station will offer its graphics programs for Apple III



software Graphics drivers for IDS 440, 460, 445, 560 Anadex, Spinwriter, Qume Both Hi Res screen dump and Custom Font print drivers.

**PRICE:**

**TITLE: APPLE III BUSINESS GRAPHICS**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** One picture's worth a thousand words. Apple III Business Graphics allows you to convert sales and stock activities, production schedules, manpower projections, quality and control data - any numerical information, in fact - into easy-to-read, comprehensive charts and graphs.

Numbers alone can't offer the insight you need to run your business successfully. Apple III Business Graphics helps you see the "big picture," providing valuable new perspectives on the figures affecting your organization. Curve fitting, for example - one of Apple III Business Graphics' powerful statistical analysis features - can help make forecasting a breeze.

The program is highly interactive, based on an easy-to-master command language. Use it to create point graphs, line graphs, bar and pie charts that give greater impact to your reports and proposals.

Apple III Business Graphics can also help you get ideas across more convincingly in meetings and presentations. When used with a high-resolution color monitor, this flexible program lets you generate eye-catching "slide shows" that will captivate your audience - and effectively demonstrate your point of view.

**APPLE III BUSINESS GRAPHICS:**

- \* allows you to plot two or more graphs on the same set of axes, so you can juxtapose Overhead, Sales and Profits, for example, and analyze their interdependence;
- \* works with DIF, VisiCalc III, Apple III Business BASIC, and Apple III Pascal allowing you to incorporate and convert data files from a variety of programs;
- \* gives you complete control of all graph parameters, as well as a wide range of creative alternatives - including the ability to plot colors;
- \* lets you enlarge any area of a graph and study it closely, so you can examine important trend lines;
- \* generates attractive charts and graphs ideal for video and print presentations.

Apple III Business Graphics is easy to use. With it, you can generate line, dash, and area-filled graphs; horizontal and vertical bar graphs; pie charts and scattergrams. You choose the graph type that will best display your data.

This powerful program also allows you to customize graphs according to your parameters. It gives you the flexibility to specify: labels for each axis; "floating" labels that identify plotted graphs; plot colors; as well as horizontal and vertical axis ranges.

**PRICE: \$175.00**

**TITLE: APPLE III COBOL**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** COBOL (Common Business Oriented Language) is the most widely used programming language for commercial and administrative data processing applications. Apple III COBOL has been certified by the General Services Administration's Federal Compiler Testing Center at High-Intermediate Level, which is a higher level than many of the COBOL systems available for minicomputers. Its features take advantage of the large memory, advanced input/output, and the other capabilities of the Apple

### III's Sophisticated Operating System (SOS).

"The power of this COBOL, especially the ability to use applications from large computers, makes the Apple III a very cost-effective solution for system integrators," said Hugh Mackworth, product manager. "For mainframe programmers, Apple III COBOL's immediacy will make it an attractive alternative." Apple III COBOL features Animator, a powerful screen-oriented, source-level debugger. Animator provides an "animated" view of actual program execution, and allows the programmer to run a program one statement at a time or continuously while watching its execution. The program can be stopped and the value of any data item checked and changed before continuing. In this way, programmers can efficiently debug a complete application. The Animator makes the Apple III COBOL a good teaching system because the student can actually see his or her code execute. Also featured is FORMS-2, a COBOL source-code generator which lets the programmer begin with a blank screen and end with a fully-operational program. FORMS-2 interactively creates data entry screens and generates COBOL source for use in a program.

**PRICE: \$500.00**

### **TITLE: APPLE III PASCAL**

#### **PUBLISHERS NAME: APPLE COMPUTER, INC.**

DESCRIPTION: Apple III Pascal is a fully professional system development environment. It incorporates an Apple III version of the UCSD Pascal Operating System (Version 2.1) and SOS, Apple III's Sophisticated Operating System. Because it offers a compiled language, the Apple III Pascal system allows programs to execute quickly and take up minimal space. The structured programming facilities and extensive data structures in Apple III Pascal make it the language to choose for large business, scientific, and educational programs.

#### **APPLE III PASCAL...**

- Increases programmer productivity because it provides a total software development facility...
- Simplifies program design through Pascal's convenient structural mechanisms and rich variety of data types...
- Lowers development costs as extended, built-in error checking catches syntax, data type, and value range errors...
- Increases system flexibility, because it is software compatible with programs written in Apple II Pascal...
- Lowers maintenance costs because Pascal's modular structure minimizes convoluted code which is difficult to understand and modify...
- Optimizes your use of available memory, because its option processor allows you to use only as much graphics space as needed...
- Expands your programming workspace, because it automatically adapts itself to available memory - which can exceed 64K bytes...
- Allows documentation, as well as program source code, to be written and modified through the utilization of a powerful, easy-to-use text editor...
- provides flexible input/output (I/O) through its user-transparent use of Apple II's Sophisticated Operating System...
- Is the most transportable of all languages: it allows access to large libraries of Pascal programs and provides the capability to run your own programs on most Pascal systems.

Apple III pascal has been designed for the sophisticated programmer or computer science student. Its richness of data types, control functions and powerful utility routines can dramatically improve a programmer's productivity on large projects. For this reason, Apple has selected Pascal as its standard system and applications development vehicle.

## WHY UCSD PASCAL?

Since UCSD Pascal is recognized as the microcomputer industry standard, using it as a basis for Apple III Pascal gives a programmer portability. Not only can a user access large libraries of Pascal programs already in existence, but also Apple III Pascal programs can run with minimum conversion on most computer systems offering Pascal.

UCSD Pascal is more than a language: compiler, assembler, editor, linker, and file handler are integrated within a single, powerful system. This provides the user with a comprehensive set of software tools for optimal program development, and the ability to create and maintain program libraries. Built-in procedures and functions enhance the string, byte, and I/O capabilities.

### WHY PASCAL FOR APPLE III?

Apple has taken advantage of all of UCSD Pascal's capabilities and can offer others as well. These include:

- Up to 64K bytes of memory for data;
- Code space limited only by total memory size of the machine;
- Easy access to Apple III's human interface features: color graphics, speaker, joysticks, and keyboard;
- Transcendental functions;
- Faster disk response and transfer rates;
- Extensive documentation.

To use Apple III Pascal, you will need the following system:

- An Apple III system with 128K bytes RAM;
- A high resolution, black and white, video monitor (Apple III Monitor recommended);
- Expansion disk drive for your Apple III

### PRICE:

## TITLE: APPLE III RECORD PROCESSING SERVICES (RPS)

### PUBLISHERS NAME: APPLE COMPUTER, INC.

DESCRIPTION: Apple III RPS permits the programmer to store and retrieve data by key values rather than by a specific physical disk address. Each data record has associated with it from one to eight keys that may be sued for accessing the record.

Apple III RPS provides two types of access to your data records: random and sequential. You can access records randomly by specifying a particular key value or sequential. You can access records randomly by specifying a particular key value or sequentially through the order associated with one of the keys. Apple III RPS supports both forward and backward sequential access through your file.

### ENHANCED B + TREE INDEX STRUCTURE

Apple III RPS employs the sophisticated B + tree index structure. A B + tree provides the following advantages:

- \* uniform performance as the file size grows;
- \* rapid retrieval, insertions and deletions of data;
- \* linked key values at the lowest level for rapid sequential access through the file;
- \* automatic reuse of space generated from deleted key values;
- \* no need for reorganization of files;
- \* retrieval of records accomplished without a prior sort.

### PROGRAM CALLS AND ACCESS STRUCTURES

Apple III RPS is written in Pascal. The interface to Pascal consists of two components: program calls and data (access) structures. The program calls tell RPS which actions to perform, and the access structures are sued to exchange information about that action. All RPS calls use an access structure for communications information and passing parameters.

### PRICE:



## **TITLE: APPLE III SOPHISTICATED OPERATING SYSTEM (SOS)**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** The Apple III Sophisticated Operating System (SOS) is a powerful software interface that helps you exploit Apple III's advanced system capabilities. With SOS, you don't need to worry about most internal system functions, such as which disk drive contains a file, which bank of memory is being used, or which slot a peripheral interface card occupies. These and other functions are all controlled automatically.

Designed for easy expandability as well as operational convenience, SOS enhances and ensures Apple III system flexibility.

A simple-to-use System Configuration Program (supplied on diskette) allows even inexperienced users to custom configure SOS to meet their specific needs. SOS Provides a solid foundation for writing advanced applications on the Apple III. It features a hierarchical file system, device level interrupt capabilities, user level interrupt capability (events), a device-independent file system, and memory management capabilities. And, since all languages on the Apple III use SOS, they all share a common disk format. For instance, a Pascal application program can access a BASIC text file just as easily as it can access a Pascal text file.

Apple's Sophisticated Operating System for the Apple III gives you the efficiency, comprehensiveness, and expandability you've always wanted in an operating system, with a degree of convenience you may never have thought possible. SOS is supplied with all Apple III systems and software.

**THE APPLE III SOPHISTICATED OPERATING SYSTEM...**

- Improves personal productivity, because it frees you from most system control responsibilities...

- Simplifies programming, because it provides powerful, standard device and file interfaces for all languages and applications...

- Maximizes system efficiency, by automatically controlling the use and allocation of system resources...

- Speeds up software development, by reducing program size and complexity...

- Ensures system adaptability, because it's designed for easy expansion and custom configuration.

SOS, which consists of five basic components, acts as a buffer between user programs and the Apple III hardware. Using these components, SOS controls Apple III system operation and resource allocation with a minimum of user involvement. As far as the user is concerned, handling the system's input/output (I/O) devices is as easy as handling its data files, once SOS has been configured with the proper drivers.

Configuring SOS is a quick and easy process, even for the most inexperienced user. Simply follow the directions in the "System Configuration Program", one of the programs contained on the System Master diskette supplied with your Apple II system.

Suppose, for example, that you've added an Apple Silentype Printer to your Apple II system. To configure SOS so it will automatically control the printer, execute the System Configuration Program and select the first option on the menu, ADD A DRIVER. Then simply follow the directions displayed on the screen.

Once you've configured SOS to control your Silentype, you need never concern yourself again with its system operational requirements. SOS handles them for you - automatically - whenever you use the printer. Configuring SOS for other printers and peripherals is just as easy.

You don't have to be a system architect to get complete access



to the Apple III's advanced capabilities. Apple's Sophisticated Operating System helps you control and configure your Apple III, maximizing its benefits and power in every configuration and application.

**PRICE:**

**TITLE: APPLE SOFTCARD III SYSTEM**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** With the Apple Softcard III System, CP/M-based application programs join the Apple III's expanding library of software, which is based on the powerful Apple III Sophisticated Operating System (SOS).

The Apple SoftCard III System was developed by Microsoft Corporation and is being distributed exclusively by Apple Computer. Microsoft also developed the SoftCard system for the Apple II and Apple II Plus computers.

"The Apple SoftCard III system augments SOS to bring dual-processor capabilities to Apple users," states David Escoffery, Apple III product marketing manager. "The range and variety of programs compatible with these two operating systems makes the Apple III an enormously flexible computer for business, science, industry, and education."

A major feature of the system is that it supports the Apple 5-megabyte mass storage system, ProFile. Both SOS and CP/M files can be stored on ProFile.

The easy configurability of the Apple III makes it simple to add the Apple SoftCard III System. No hardware or software modifications of any kind are required to install the system circuit board, which plugs into any of the Apple III's peripheral card slots. Operation of the Apple III is not affected when not in the Z80 mode.

The Apple SoftCard III System includes a plug-in Z80 microprocessor card, CP/M software, and four manuals which describe card installation and use of the software. The system also provides Microsoft BASIC.

The system requires a 128K Apple III personal computer with a suitable video display device. Optional peripheral devices include a compatible printer, external Apple Disk III drives or ProFile hard-disk drive.

**PRICE: \$450.00**

**TITLE: BANKER'S CONSTRUCTION LOAN REPORTER**

**PUBLISHERS NAME: COMPUTERIZED CONSTRUCTION MANAGEMENT SYSTEMS**

**DESCRIPTION:** This program combines two of C.C.M.S.'s most successful program's into one for the Bank who loans money for the construction of residential or small commercial projects. By combining Job Cost and Scheduling a bank can now have a printout of scheduled costs on any project with budgets, actuals, and comparisons. This will help stop prepayment, double payment and over payment etc. for work on construction projects. Combine this program with the Apple III on any Bank Manager's desk and see how easy construction loan reporting can become. Dealer demo's upon request.

**PRICE: \$450.00**

**TITLE: BUDGET MODEL**

**PUBLISHERS NAME: DATA SYSTEMS, INC.**

**DESCRIPTION: FEATURES:**

1. Should be used in conjunction with Multi-Year Planning Model to formulate short term strategy in line with long term plans. Management can update the budget forecast every month

with actual figures which facilitates comparison of actual performance. Produces full range of financial ratios for actual and budgeted months, and incorporates management's interest rate forecast for the next twelve months.

2. Installation may be handled completely by the user. No computer expertise necessary. DSI will provide assistance over the phone.
3. Apple III computer, two 5 1/4" floppy disk drives, one video monitor, one 132 column printer, one parallel or serial printer interface card, one disk controller card.
4. One thousand dollars per model. Quantity discounts are available for customers who purchase more than one of our products. Optional \$100.00 annual maintenance fee qualifies customer for annual updates and improvements to original model.
5. Applesoft BASIC; software is compatible with computers manufactured by Apple Computer, Inc. only.

**PRICE: \$1000.00**

**TITLE: COMMERCIAL ACCOUNT PROFITABILITY ANALYSIS**

**PUBLISHERS NAME: DATA SYSTEMS, INC.**

**DESCRIPTION: FEATURES:**

1. Allows managers of financial institutions the ability to determine profit or loss on specific commercial accounts. DDA activity, time deposits, and loan balances and rates are all used as a basis of comparison to expenses incurred for handling specific accounts. Income may be increased by requiring customers to maintain a larger minimum balance or by assessing a hard dollar charge against the DDA balance.
2. Installation may be handled completely by the user. No computer expertise necessary. DSI will provide assistance over the phone.
3. Apple III computer, two 5 1/4" floppy disk drives, one video monitor, one 132 column printer, one parallel or serial printer interface card, one disk controller card.
4. One thousand dollars per model. Quantity discounts are available for customer who purchase more than one of our products. Optional \$100.00 annual maintenance fee qualifies customer for annual updates and improvements to original model.
5. Applesoft BASIC; software is compatible with computers manufactured by Apple Computer, Inc. only.

**PRICE: \$1000.00**

**TITLE: COMPUTER CASES**

**PUBLISHERS NAME: COMPUTER CASE COMPANY**

**DESCRIPTION:**

API04 Apple III two additional drives and Silentype

**PRICE: \$139.00**

**TITLE: CONJOB**

**PUBLISHERS NAME: COMPUTERIZED CONSTRUCTION MANAGEMENT SYSTEMS**

**DESCRIPTION:** This is a perfect job cost accounting program designed by a contractor for contractor's, though the program is versatile to other applications. The program breaks any job down into user specified phases. Each phase up to 45 line items can be specified for exact task breakdown. Once the report set is defined then the computer asks for line item budgets. During the job completion the actual costs are entered. The resulting printout compares line items, phases and total job budgets to actuals in two ways, by percent and by dollar variances. A cover

page is printed which is a summary of all phases which adds percent of budget to the percent complete and dollar variance columns. CONJOB makes it easy to see where a particular line item, phase or job has gone over or under budget at a glance. Also reveals upcoming budgeted costs for cash flow. Comes user friendly with on screen "how to" instructions. No restrictions as to number of jobs. Dealer demo's upon request.  
**PRICE: \$195.00**

**TITLE: CONSTRUCTION BOOKKEEPER**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS: two disk drives, 132 column printer**

**DESCRIPTION:** The Construction Bookkeeper is designed specifically for the General Contractor or larger sub-contractor who needs to computerize his construction business. The program comes complete with a general ledger element, a job cost and project management system and a full feature sub-contractor control system. It also includes an extensive payroll system that posts all costs to the jobs and the general ledger accounts. A special document processor aids the secretarial staff in keeping accurate reports of all the contractor's jobs. The system also provides trial balance reports, monthly balance sheets, income statements, and an individual job cost for each job in progress. The system prints all payroll checks and monthly, quarterly and annual payroll reports.

**PRICE: \$795.00**

**\$ 50.00 manual purchased separately**

**TITLE: CONSTRUCTION MATERIAL LIST GENERATOR**

**PUBLISHERS NAME: COMPUTERIZED CONSTRUCTION MANAGEMENT SYSTEMS**

**DESCRIPTION:** At last a program that takes all the headache & time out of material estimating on residential and small commercial projects. this program asks for linear feet and square foot dimensions from a set of blueprints & calculates the required material needed to build the project. A great take-off generator. Cuts estimator time in half on this portion of estimating. A complete list from footing to roofing is printed in purchase order form for pricing. Perfection factor's are user adjusted to make the program more accurate as it is used. Worksheets are used for a systematic approach to doing a take-off so omissions are eliminated. Dealer demo's upon request.

**PRICE: \$450.00**

**TITLE: COST ACCOUNTANT**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS: two disk drives and 130 column printer**

**DESCRIPTION:** The Cost Accountant is capable of managing 200 active jobs at a time. The program is designed to aid professionals such as engineers, architects, consultants, custom manufacturers, and building subcontractors with their job cost accounting needs. The program's payroll system contains all reporting elements to meet most state and federal regulations. A report element is included which allows the professional and clerical staff to keep accurate reports on every job. The system makes it easy to prepare trial balance reports.

**PRICE: \$459.95**

**\$ 50.00 manual purchased separately**

**TITLE: CYTRON MASTERS**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**APIII-10**



**DESCRIPTION:** CYTRON MASTERS puts you in command of an army of robots, or cytrons, who battle other cytron armies to settle planetary disputes. Each army consists of laser-blasting shooter units, kamikaze-like mine cytrons, and devastating guided missiles. For defense, there are mobile bunker cytrons and anti-missiles. As Cytron Master, you have energy centers at your disposal to build different types of cytrons. You may capture your enemy's energy centers and increase your power. Victory is yours when you cross the battlefield and destroy your enemy's command center. The action is fast-paced, and the animation and sound effects are terrific. There are three speed levels which allow a player to learn to control his cytrons before taking on a more experienced Cytron Master. There is also a missile-anti-missile scenario where you practice control of your two most important weapons in arcade-like action. The game includes two-player and computer-as-opponent game modes.  
**PRICE: \$39.95**

**TITLE: DATA BASE III**

**PUBLISHERS NAME: CREATIVE SOFTWARE**

**DESCRIPTION:** Data Base III is a general purpose program retrieval system. It is a fast and versatile program for the Apple III. Data Base III allows you to design the data base to fit your needs.

The data base creation routine is an easy, step by step guide to designing your data base. You define the placement of each field on one of nine screens. Up to 100 fields can be defined per record. Predefined field types included are phone numbers, social security numbers, zip codes, dollar amounts and numeric values. A user definable field can be a combination of one or more fields. All fields are validated during input.

The main routine allows you to add, delete, update, or search for any record by any key. Once a record is found, retrieval of the next or previous record is accomplished via one key command.

The powerful report generator allows calculations, totaling, averaging, and counting. Reports can even be created to fit existing forms. Record selection allows the reports to be limited to only the desired records in the data base. Report layouts can be saved to be reused or updated as desired. Reports can be written to a disk file instead of a printer, allowing these files to be merged with Apple Writer III text.

Some additional features include: Password protection for data bases. Sample data bases are included. Screen layout sheets and report layout sheets are also provided.

**PRICE: \$175.00**

**TITLE: DATA MANAGER FOR WEATHER OBSERVATIONS**

**PUBLISHERS NAME: CLIMATE ASSESSMENT TECHNOLOGY, INC.**

**DESCRIPTION:** New microcomputer software is available to store and analyze weather observations from your home, farm, school, or local airport station. It allows simple entry of daily temperatures and precipitation amounts which are stored, then summarized. Routines in the software produce tables and graphs showing accumulated excesses or deficits, departures from normal and extremes observed etc.

Current weather can be compared with that of any year since 1951 utilizing data from the user's local area contained in the software package. This data base is continually updated as owners add their observations.

**PRICE: \$59.95**



**TITLE: DESKTOP/PLAN****PUBLISHERS NAME: VISICORP****HARDWARE REQUIREMENTS: printer****DESCRIPTION:** It speeds and automates financial and business planning.

The Desktop/PLAN programs are highly organized financial planning, budgeting and analysis packages that guide you from the original layout of your financial model through computerized calculations to the final printout of a boardroom - quality report. It can produce its own line charts and bar graphs, too, for greater visual clarity.

Complex and frequently used financial calculations - even multi-step operations using chains of tests and formulas - become easier, quicker to handle. And Desktop/PLAN can handle very large financial "models," too. It is especially useful for transferring individual lines from several budgets into summary budget, and for consolidating identical departmental budgets into an overall company budget with ease and simplicity.

If you currently use timeshared financial modeling programs, you'll find Desktop/PLAN familiar and easy to use - and no more monthly timeshare bills! If you've never done financial modeling, Desktop/PLAN can introduce you to an easier and more productive way of financial planning and budgeting than the laborious manual methods of the past.

Desktop/PLAN can also receive information from our VisiCalc program - an interchange capability giving you greater combined usefulness.

Ask your retail computer store salesperson for a demonstration of the Desktop/PLAN program. See how quickly you could have real planning power for all your business plans.

**DESKTOP/PLAN FEATURES:**

- \*Consolidates identical sub-models into one larger model, and transfers individual lines from other models into a summary model.
- \*Powerful calculation capabilities include 20 built-in functions
- \*For the sophisticated user, up to 20 different "custom calculation rules" - including program "looping" and IF-THEN logic - may be added by the user to handle specific ways.
- \* Plotting feature produces bar graphs with up to two data series with the Desktop/PLAN. Line charts can be produced with up to four data series with the Desktop/PLAN.
- \* Model size can be up to 300 columns in Desktop/PLAN III with up to approximately 1000 rows.
- \* Automatically formats printed report.
- \*Desktop/PLAN III takes advantage of the advanced Apple II features, such as 80-column screen, upper and lower case letters, expanded keyboard and more user memory.

**PRICE: \$300.00****TITLE: EASY (EXECUTIVE ACCOUNTING SYSTEM)****PUBLISHERS NAME: THE DENVER SOFTWARE CO.****DESCRIPTION:**

- \* Provides current financial reports available at any time during accounting period
- \* Prints invoices, statements, and checks
- \* User-friendly operational and accounting manual with a Quick Reference Card
- \* Fast access to information
- \* Integrated system updates data
- \* Entirely menu-driven
- \* Multiple company use
- \* Ages accounts receivable

- \* Automatically calculates finance charges
  - \* Flexible accounting periods
  - \* Allows for partial and manual payments
  - \* Generates backup data for your protection
  - \* Add-on modules available for inventory, payroll, budgeting, order entry, graphic analysis, and word processing.
- PRICE: \$565.00**

**TITLE: GALACTIC GLADIATORS**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** GALACTIC GLADIATORS introduces you to a collection of bizarre creatures from apart of the galaxy called "The Bubble" who confront each other on a variety of battlefields. Each of the sixteen creatures is rated for strength, dexterity, endurance and experience. The creatures have the right to bear arms such as: the stun wand, vibro knife, laser sword, disruptor, gaper, and heat ray gun, to name just a few.

The basic game, "Brawl in Cosmic Mike's Place," allows you to choose any one of seven teams made up of three of the regular species of creatures with which you duel to the death against a team of equal size. You may have a lightning-quick Koraci, a stocky amphibian Frogloodyte, and a Viking-like Wodanite battling against a powerful Dulbian (with two arms growing out of its armor-plated head), a winged, flightless Cygnian, and a caped, insect-like Zorcon.

There are a variety of scenarios possible with this game. A player can use pre-established battlefields or design his own, vary the amount of gladiators per team and add special rules (such as prohibiting the use of certain weapons).

Players can also send their teams on quests in which one team must win four of five battles in order to reach a goal. There are three pre-established quests to choose from or the player may create his/her own.

**PRICE: \$39.95**

**TITLE: GL-PLUS**

**PUBLISHERS NAME: GREAT DIVIDE SOFTWARE, INC.**

**DESCRIPTION:** THE MANAGEMENT TOOL FOR BETTER ACCOUNTING.

To many managers accounting and the preparation of financial reports are time consuming chores that have to be struggled through. But now, at last, accounting can be simplified! GL-PLUS "The Management Tool for Better Accounting" is an accounting system designed for the Apple III computer. It is a flexible, easy to use, journal-based GENERAL LEDGER system. The computer and GL-PLUS combine to provide you with a tool. A tool to make your accounting chores easier. GL-PLUS guides you quickly through entries and then automatically sorts and posts them. Report preparation is a "snap" with GL-PLUS. You select the report you wish and the rest is done automatically. GL-PLUS includes a PLUS. The PLUS is a built-in capability that can be implemented anytime you desire.

**SYSTEM FLEXIBILITY**

The GL-PLUS system is flexible to use. It will accept a chart of up to 500 general ledger accounts using a number system (between 1 and 9999) of your design! This means that you can use your existing account names and numbers or create new ones to fit your needs.

Adding to the systems' flexibility is the PLUS of having both accounts receivable and accounts payable built into the program. Both are easily implemented and you decide if and when you wish to use either or both. Each supports a subsidiary set of ledgers, as well as invoice by invoice records for all current

balances. Receipts and payments can be applied to specific invoices, including partial receipts or payments. GL-PLUS was designed to handle multiple companies. A menu option allows the operator to quickly switch companies by simply changing data diskettes. This is convenient and saves considerable time for anyone maintaining the accounts of several different companies.

#### FLEXIBLE REPORTING

An accounting system can be judge, at least in part, by the reports it produces. GL-PLUS easily provides a wide variety of excellent reports including:

- \* General Journal Report that lists all journal entries by: transaction date, entry order or account order.
- \* General Ledger Report with balanced proof, year-to-date balance, yearly budget and percent-of-budget. The year-to-date, budget and percent amounts are optional on any or all accounts.
- \* Balance Sheet with current ratio.
- \* Income Statement (P&L) with optional year-to-date, budget and percent amounts.
- \* PLUS the following reports for Accounts Receivable and Accounts Payable:
  - \* Customer and Supplier Reports of all companies or just those with balances.
  - \* Accounts Receivable and Accounts Payable Reports detailed for all companies or a specific company.
  - \* Aged Receivables and Aged Payables Reports with aging from 0-30, 31-60, 61-90 and over 90 days.

All of these reports can be printed at any time and are instantly updated on all accounts with each transaction entry. No special posting is ever needed. Therefore company balances and invoice records are always as current as the last entered transaction!

#### USER FRIENDLY

Ease of use was a major consideration in the planning an development of GL-PLUS system. the owner's manual has complete step-by-step instructions that lead you through each phase of the program. Screen-to-user communications are simple and easy to understand and the "user friendly" menus guide you quickly to the operation you wish to perform.

Another handy feature is the SPOOL REPORT option. With this option you can set up a series or "spool" of reports which are printed without further operator assistance. This can be a real time saver and allows the operator to do other tasks while the reports are being prepared.

Flexibility, ease of use and excellent reports all add up to provide you with an extraordinary accounting system that will save time and provide timely financial information. We think you will agree that the GL-PLUS accounting system is "The Management Tool for Better Accounting".

#### PRICE:

#### TITLE: GUADALCANAL CAMPAIGN

#### PUBLISHERS NAME: STRATEGIC SIMULATIONS

DESCRIPTION: The game starts on August 7, 1942 and ends on December 31, 1942. Each day is divided into AM and PM turns - 294 turns in all. Every Japanese and American warship that historically participated in the campaign is included and rated for speed, cargo/plane carrying capacity, damage points, and number of main guns, secondary anti-aircraft guns and torpedo tubes.

In spite of the game's complexity, the superior programming makes this a very easy game to play. the computer provides a colorful search map and allows for realistic battle conditions, such as



hidden movement, limited intelligence, and inaccurate ship sightings. During tactical battle, it resolves every combat down to the last ship and plane.

As chief strategist, you must form forces from you fleet, provide them with a mission, and deploy them wisely. You must not only deal with the interaction of infantry, ships, and planes, but with the smaller details such as loading transports and training carrier pilots. The computer will provide you with a pipeline-of-ships report so you know when repairs ships and reinforcements will be available.

When a long game is neither feasible or desirable, players may choose one of the shorter scenarios. there is a 184-turn game that lets you bypass preparatory details and jump right into the heat of battle. There are also four mini-games that range from four to twelve turns, one of which is the Battle of Coral Sea. these games can be played in two to four hours.

Finally, there is a solitaire game in which the computer takes on the role of the Japanese.

**PRICE: \$59.95**

**TITLE: HURRICANE TRACKING PROGRAM**

**PUBLISHERS NAME: CLIMATE ASSESSMENT TECHNOLOGY, INC.**

**DESCRIPTION:** Microcomputer software is now available for tracking hurricanes and tropical storms in the Caribbean Sea and the Gulf of Mexico. The program allows for each reported position of a storm to be input then computations are made to determine the category of intensity, speed of movement, distance from any potential point of landfall, and several other parameters. A plotting routine show the U.S. gulf coast with successive position of a storm's track.

Also included in the software are several files containing data for classic hurricanes which have struck the U.S. Gulf coast. Their tracks can be displayed to provide analogs for new storms.

**PRICE: \$29.95**

**TITLE: INDIVIDUAL U.S. INCOME TAX PACKAGE**

**PUBLISHERS NAME: PANSOPHICS, LTD.**

**DESCRIPTION:** The tax tables (as well as the tax rate schedules) are automatically used for the tax calculations!

Each and every line that appears on form 1040 is included this year!

Both pages one and two of form 1040 can be printed directly onto the form, and this printing facility can be used with ANY printer!

This year's Visicalc tax models don't just prepare your return. They help you plan for higher after-tax income!

Should you itemize or take the standard deduction? Sell or hold stock? File joint or separate returns? Purchase or lease business equipment? Revise your estimated income tax? Have your employer withhold more of your pay - or less?

With Visicalc and one of these powerful new tax models loaded in your microcomputer, you can get answers to questions like these instantly. Now, before you make an important personal or business financial decision, you can see its impact on your tax situation immediately, and to the penny.

Here's what Visicalc tax models do - automatically:

- Calculate your tax liability using IRS tax schedules or tax tables.

- Calculate your self-employment tax.

- Calculate your medical and prescription expense deduction.

- Calculate funds overwithheld for F.I.C.A. by more than one employer.



Calculate Schedule D losses and gains in any current-year combination.

Not only that, these models are formatted to print directly onto pages 1 and 2 of IRS Form 1040!

Hundreds of hours of preparation went into the making of these models. Furthermore, several hundred of these packages were in use last year and they have been thoroughly field-tested by certified public accountants. But they cost less than a single visit from a good tax consultant, and you'll use yours all year round for planning and estimating.

**PRICE: \$75.00**

**TITLE: JOB CONTROL SYSTEM**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** THE JOB CONTROL SYSTEM CAN BE YOUR BUSINESS MANAGER JCS tells you what's happening now! Job information is entered into the system just once. Then leave the rest to JCS. If you're in construction, manufacturing, or a service industry, this system can give you the valuable management information you need in order to keep close control over what's going on in your business. As each job progresses, profit/loss is constantly monitored. With JCS...

**JCS IS EASY TO USE AND IT SPEAKS YOUR LANGUAGE**

JCS is an uncomplicated management tool. The reports generated by the system may be customized to show only the information needed by a company manager. There is no confusion.

**JCS KEEPS TRACK OF EVERY DETAIL**

When? What? Who? How long? How many? How much? All of this information is detailed on individual job activity reports. You are given up-to-the-minute reports showing job status and the real costs of producing a product or providing a service. JCS consolidates and files everything for ready access when you need it. It allows you to provide estimates with complete precision to control costs and avoid over or underbidding. The Job Cost Summary report compares actual costs versus estimated costs then prints variances and the exact profit/loss values.

**INCREASED PRODUCTIVITY - THE REAL BENEFIT**

JCS shows clearly and quickly excessive material costs, time spent, and/or downtime problem areas. JCS provides a reliable measure of overall productivity for each job and it facilitates prompt billing for improved cash flow.

All labor hours, material costs, outside service costs, production quantities, shipped quantities, etc., are posted to JCS and printed on a daily Post Audit Trail. It presents total posted hours for each employee plus a grand total for all employees.

**YOUR ACCOUNTANT WILL LOVE YOU**

Your work-in-process inventory value figures will be accurate at last. JCS will computer precise figures which your accountant can use for providing an accurate financial statement.

**HOW TO GET STARTED**

The Job Control System can be easily integrated with your existing method of collecting hours, costs, and quantities produced. The system can be used by any small or medium sized company in construction, manufacturing, or a service industry.

**PRICE:**

**TITLE: JOB SCHEDULING**

**PUBLISHERS NAME: COMPUTERIZED CONSTRUCTION MANAGEMENT SYSTEMS**

**DESCRIPTION:** This scheduling program creates a bar chart with user specified line items. Line items are entered from the key board with time allowed to accomplish each item. This report set

is stored for future use, can be stored for various jobs. The computer then asks for total number of days per month and date for beginning. The resulting printout schedules which line item has to be accomplished on what day to finish the total job in the allotted days. Primarily set up for residential or small commercial construction projects, though various applications can be created. No limit on number of jobs. Dealer demo's upon request.

**PRICE: \$175.00**

**TITLE: LEXICHECK**

**PUBLISHERS NAME: QUARK ENGINEERING**

**DESCRIPTION:** Lexicheck is a high performance spelling checker designed especially for use with Word Juggler. Lexicheck scans long documents for misspellings at a rate of 9,900 words/minute (14,00 wpm using a hard disk drive).

Lexicheck is accessed from Word Juggler with a singly keystroke (actually, CLOSED APPLE and "7" on the keypad). A dictionary of 30,395 words comes with Lexicheck. It is specially compressed and uses up only 75,000 bytes of disk space (a little more than half a disk). By adding your own dictionaries for specialized terms, Lexicheck's vocabulary can be expanded almost indefinitely (a blank diskette can hold almost 14,000 words with an average word length of 9 characters). A legal dictionary which adds 8,000 legal terms to the basic 30,000 word dictionary is available separately.

When you check a document, Lexicheck will display each word it doesn't recognize on the screen in the context in which it first occurs. You may either skip over the word, replace it with the correct spelling or add it to your own personal dictionary. Lexicheck normally displays unrecognized words in document order, but you can have them displayed in alphabetical order if you prefer.

Lexicheck allows you to virtually eliminate typographical errors and common misspelling. And at less than a penny a word, you may find that Lexicheck is the most cost effective program you have ever purchased.

**PRICE: Lexicheck: \$195.00**

**Legal dictionary: \$85.00**

**TITLE: MAIL LIST MANAGER**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Apple's Mail List Manager program for the Apple III automates the tedious, time-consuming tasks of generating and maintaining the address and telephone listings of your customers, colleagues, prospects, and personal acquaintances. Designed for professional performance and ease of use, the program stores, sorts, edits, and prints mailing labels and phone lists in their entirety, or selectively by ZIP code, name, or special user-defined key.

Each Mail List Manager entry may contain up to five lines of information - enough to include a name, address, company name, and business phone number. As many as 916 entries can be stored on a single diskette, and any number of entries and diskettes may be merged to create a single, large mailing list.

Fast and sophisticated sorting is routine with Mail List Manager. You can sort mailing labels by name of ZIP code, and an entire diskette can be sorted in less than two minutes. You can even merge subsets of sorted lists to create new lists - for example, names from A to G only. And you can print letter-perfect mailing labels quickly and efficiently, too, saving hours of repetitive typing time. If you're looking for a more

convenient, flexible way to keep important names, addresses, and telephone numbers organized and at your fingertips, Apple's Mail List Manager for the Apple III is the ideal solution.

#### MAIL LIST MANAGER...

- Increases mailing list efficiency, because it stores, sorts, edits, and prints out labels at the touch of a few keys...
- Requires no special training to use, because its menu and forms entry displays are simple and self-explanatory...
- Increases your postal communications control, because it lets you sort and print mailing labels by name or ZIP code.
- Speeds sorting, because a single diskette (holding information for up to 916 labels) can be sorted completely in only 90 seconds...
- Extends your system flexibility, because its unique, user-assignable ID codes let you set up your own custom label selection without any programming.

After inserting the Mail List Manager program diskette into your disk drive and booting your Apple III system, your screen will display a title page, followed by the program's main menu. Two of the menu's options must be used before you can begin to create your mailing or telephone lists.

**INITIALIZE A DISK.** The Mail List Manager program diskette helps you create the list you need, but is not intended for storage of those lists. You must prepare a blank, formatted diskette for that purpose. Select INITIALIZE A DISK from the main menu. On the screen, you'll see a display that explains, step-by-step, how to create the storage diskette.

**CHOOSE DRIVE.** Mail List Manager can be used with either a single or multiple disk drive system. (Note: To merge lists, a multiple drive system is required.) Once you have prepared a storage diskette, you must select the CHOOSE DRIVE option to identify the drive you'll be using to store your lists. This step is necessary whether you're using just one drive or several.

With your drive chosen, you're now ready to start creating lists. Menu option 3, ENTER MAILING LABELS, lets you simply "fill in" a form - the mailing label outline - item by item. Individual labels have ample space for a person's name, company, address, city, state, ZIP code, and telephone number (including extension, if any). There are, in addition, two special line items, Name Key and Label Key, which can be extremely useful.

The Name Key is an eight-character name code under which each label is filed for sorting purposes. Mail List Manager automatically inserts the Name Key for you. For example, if the label is for John P. Jones, the program will insert "Jones" on the Name Key Line. You have the option, of course, to change the Name Key if you wish. Suppose, for example, you want a list sorted by company names instead of individuals' names. You can change the Name Key from "Jones" to "XYZ Corp.", for example, without changing the way the label will look when it's printed.

The Mail List Manager program recognizes that appellations such as "Jr." or "III" are not last names, even though they sometimes occur at the end of persons' names. In other words, if you're entering a label for John P. Jones III, the program will display "Jones", not "III" on the Name Key line.

The Label Key, six-characters in length, can be used to print sublists from a primary list. Suppose you have a large list of mailing labels, and you want to keep your customers separate from your suppliers. Simply type "cust" (or some other identifier) on the Label Key line for customers, and "supp" for suppliers. Later, you can instruct Mail List Manager to print separate mailing label lists by "cust" or "supp.". You can fine-tune your mailing lists as much as you want, saving yourself time, postage.

Mail List Manager also provides a tab replication feature. When you're entering labels, pressing the TAB key on your Apple



III moves the cursor to the next space in the label outline. There, the entry used for that item on the preceding label is displayed, and can be instantly replicated on your new label simply by tabbing again. This feature is especially helpful when creating a number of labels for persons in the same company, city, state, or ZIP code area.

After you've created a mailing list, you can make use of the remaining items on Mail List Manager's main menu. To locate a specific name on your list, select FIND A MAILING LABEL and enter (1) the exact name, or (2) a name phonetically similar to the one you're seeking, or (3) the particular sort order for that name (for example, all labels for names beginning with "Z"). Your screen will display a "window" through which you can view the label(s) you requested, plus the labels immediately preceding and following it. And the up and down arrow keys on your Apple III keyboard let you "scroll" your entire label list if you wish - that is, roll it forward or backward onto the screen.

To revise any information on a mailing label after locating it, select MODIFY MAILING LABELS from the program's main menu. Position the cursor on the line(s) to be changed and type the new information over the old. Once you've made your revisions to the mailing list, select SORT MAILING LABEL DISK to sort your mailing labels, either alphabetically (by Name Key) or geographically (by ZIP code).

Set your printing parameters and specify the Label Key (if any) by choosing CHANGE PARAMETERS on the main menu. To print lists or labels, select LIST/PRINT LABELS. You can print all or part of a list, or only the names and phone numbers. Or you can display or review your entire label list - as it would appear if printed - on your monitor screen.

Mailing List Manager's last menu option, MERGE MAILING LABEL DISKS, allows you to merge separate lists together into one comprehensive list. In this way you can generate and print large numbers of mailing labels that span individual diskettes.

A second and third disk drive are necessary to take advantage of the powerful merge feature of Mail List Manager. Merging two lists on a three-drive system, (when each list fills a diskette), takes approximately 8-15 minutes. A list nearly filling nine diskettes (over 8000 names) takes slightly over an hour with a four drive system.

The Apple III Mail List Manager is a sophisticated mail list management program that gives you the kind of versatility and capacity you need to generate professional mailing labels for billing, direct mail, correspondence, or any other uses dictated by your business needs.

**PRICE:**

**TITLE: MAIL LIST MANAGER INTERFACE**

**PUBLISHERS NAME: QUARK ENGINEERING**

**DESCRIPTION:** The Mail Lister Manager Interface is an accessory for Word Juggler which allows it to access files created by Apple's Mail List Manager. And once the Mail List Manager Interface has been installed, it can be activated with the touch of a button (actually, CLOSED APPLE Ø).

Printing form letters for each person in your mailing list is a snap. Using the IF command you can also print letters only for certain individuals. And each letter can be tailored to the special needs and interests of that person. You can even send entirely different letters to different people.

Manual selection of entries is also possible. Before printing each letter, the entire contents of the mailing record is shown on the screen. Appropriate use of the IF command will make Word Juggler ask you whether to print a letter for that individual or



not.

The Mail List Manager Interface gives you the sophistication to handle complex form letters without difficulty.

PRICE: \$35.00

**TITLE: MEDICAL CLINIC**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS: two disk drives, 130 column printer**

**DESCRIPTION:** The Medical Clinic is designed for the clinic or physician's office that requires a system that is capable of managing a substantial patient base. This easy to operate system allows the clerical staff to schedule appointments, record daily transactions and prepare billings (including third party billings). The "Superbill" portion of the program permits the patients to prepare their own claims and improve the physicians' cash flow.

PRICE: \$1600.00

\$50.00 manual purchased separately

**TITLE: MEMOMINDER**

**PUBLISHERS NAME: SOFTWARE RESOURCES COMPUTER WORKS, INC.**

**DESCRIPTION:** Memominder manages memos and reminders. It comes on a self-booting disk and includes a ten-page reference manual. Operation of the program is simplicity itself, and a few minutes tinkering with the commands on the menu will suffice to understand the basics of the Memominder operations.

The memos and reminders are filed in a sequential file for maximum use of computer and disk space. Memominder reads the current memos when it is booted, and updates the files during operation.

Up to 400 reminders can be kept at once in the files, depending on memory size available and the size of individual memos. These reminders can be 200 characters long, and can be filed with a specific date, time and person.

The review routines present the selected memos in easy "pages," which can be flipped by to find the desired reminder.

The presentation page lists each memo in this format:

05/11/81 MON 3:30 pm Call West Coast offices to check on arrival of Johnson shipment.

The operations of entering, deleting and printing memos make use of a two-month calendar with a floating cursor. The calendar can be processed from the current date to the year 2000 in increments of months or years. The date is selected by a floating cursor. A similar cursor, located on a twenty-four hour clock, selects the time.

Up to ten persons can use Memominder at one time. The memos are indexed by person, and any of the operations on the menu can be performed using only the subset of memos applicable to the "signature" chosen by the menu item "Target activity to a single person."

The hard copy produced (on any printer configured on the Apple III) has a header with the person, date, time and activity. The printing subroutine allows the following options:

Print memos for today

Print memos for today and tomorrow

Print memos for the coming week

Print memos for the coming month

Print the whole file of memos

Print memos for a selected date

While you can delete specific memos at will, the out-of-date memos (more than one day old) are automatically deleted by Memominder.

Do you have one of those Apple III's without working clocks? No problem. The program is supplied with a selectable subroutine which allows you to enter the date at boot-up. Memominder is written in BASIC and can be modified for specific applications.  
**PRICE: \$55.00**

**TITLE: MULTI-YEAR PLANNING MODEL**  
**PUBLISHERS NAME: DATA SYSTEMS, INC.**  
**DESCRIPTION: FEATURES:**

1. User develops long term strategies for profitability and uses built in modeling capabilities to determine the effect of these strategies on the projected long term profitability and capital adequacy of the institution. Model produces full range of financial ratios, and features user definable asset, liability, equity, revenue and expense accounts.
2. Installation may be handled completely by the user. No computer expertise necessary. DSI will provide assistance over the phone.
3. Apple III computer, two 5 1/4" floppy disk drives, one video monitor, one 132 column printer, one parallel or serial printer interface card, one disk controller card.
4. One thousand dollars per model. Quantity discounts are available for customer who purchase more than one of our products. Optional \$100.00 annual maintenance fee qualifies customer for annual updates and improvements to original model.
5. Applesoft BASIC; software is compatible with computers manufactured by Apple Computer, Inc. only.

**PRICE: \$1000.00**

**TITLE: PAYROLL MODULE**  
**PUBLISHERS NAME: DATA SYSTEMS, INC.**  
**DESCRIPTION: FEATURES:**

1. Tracks employee payroll/personnel data; prints checks and check register; departmentalizes payroll costs; prints quarterly report; produces year end W-2's and features easily modifiable tax tables allowing every state's tax tables to be entered easily by the user. Offers complete payroll flexibility to incorporate unique deductions for weekly, bi-weekly, and semi-weekly, and semi-monthly payroll periods. system is available on hard disk or floppy disk and is capable of handling companies with over 1000 employees.
2. Installation may be handled completely by the user. No computer expertise necessary. DSI will provide assistance over the phone.
3. Apple III computer, two 5 1/4" floppy disk drives, one video monitor, one 132 column printer, one parallel or serial printer interface card, one disk controller card.
4. \$620.00 per module; quantity discounts available for customers who purchase more than one of our products.
5. Applesoft BASIC; software is compatible with computers manufactured by Apple Computer, Inc. only.

**PRICE:**

**TITLE: PHD**  
**PUBLISHERS NAME: XCOMP**

**DESCRIPTION:** XCOMP's ne PHD is the first Personal Hard Disk with FULL capacity built-in backup!  
Now your customers can advance to a new degree of computer power and data security with 10 Megabytes! Five MB of backup.

Need another pitch for the sell?

Tell your customers that the savings in operator time will PAY for the PHD.

the compact PHD can also be used as a single 10MB drive. In the future it can be expanded to a 10 x 10 or 20 MB configuration.

**PRICE:**

#### **TITLE: PROFILE**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION: THAT'S A LOT OF STORAGE**

It takes 35 regular floppy diskettes to hold as much. But with Apple's new ProFile Personal Mass Storage System on your Apple III, you get 5 full megabytes of data on line, ready for quick access.

Sooner or later - while you're working with an Apple III and taking advantage of the powerful features it offers - you'll want this much storage capacity. Perhaps to hold all your communications - letters, memos, reports, and other documents - in a single place, conveniently, securely, and ready for review or updating. Or to keep at fingertips all the financial information for your \$10 million company. Or to let you create or work with large programs or data bases.

#### **COMPACT AND PERSONAL**

ProFile is called a personal mass storage system because, like the Apple III, it's compact, simple to install...and ready to serve you, one-on-one. And unlike other hard disk drives, it's so quiet you won't even know it's there.

Its "Winchester-type" disk drive, power supply, and electronic components are all packaged in a styled, compact case that stacks neatly between the Apple III and the Monitor III. Except for an on-off switch, all controls are built in and work automatically with the Apple III. Installation involves little more than plugging into the Apple III and a power outlet, and takes just minutes.

#### **FASTER ACCESS, TOO**

Loading or saving data with diskettes can be slow for some applications. ProFile lets you retrieve information much more quickly - about 10 times as fast as a conventional floppy disk drive.

This kind of efficiency can really make a difference if you're constantly accessing stored data for programming or updating files. With ProFile, you and your Apple III will spend less time waiting and more time producing results.

ProFile is more than just another data storage device. It's a whole new way of using the Apple III - better.

You can use ProFile for whatever you're doing with an Apple III computer. ProFile not only lets you do the same jobs faster and with greater ease, but it also opens up entirely new application possibilities.

#### **SOFTWARE DEVELOPMENT**

ProFile lets you keep all successive versions of programs you're writing on the same disk, thus making software development less tedious and time-consuming. ProFile is especially valuable to Pascal developers, many of whom choose the Apple III because it is the most economical vehicle for developing programs in that powerful language. And with ProFile you don't have to worry about swapping diskettes in order to access the large number of separate files needed to compile a typical Pascal program - all the files you need are on line.

#### **FINANCIAL MODELING**

ProFile stores all your VisiCalc, Desktop/Plan, or other financial modeling files in one place, allowing you to switch from one file to another just by pressing a few keys. Together



with the Apple III's huge 256K memory option, it gives you plenty of room to expand your modeling capabilities.

#### WORD PROCESSING

ProFile stores the equivalent of at least 1200 pages of single-spaced, typed text. You can use it with word processing software such as Apple Writer III to store a large number of documents of different sizes - and be able to access any part of any document in seconds.

#### FORECASTING AND BUDGETING

ProFile helps you make better decisions, because it lets you draw on a greater data base in generating answers to questions about pricing, market share, profits, or any other parameters you wish.

#### GRAPHICS

Thanks to ProFile's fast access, you can display plots, charts, and finished graphics many times faster than with conventional diskettes. ProFile also makes it possible for you to create highly sophisticated graphics programs that require large amounts of storage space.

#### MAILING LISTS

ProFile lets you store and retrieve lists of name and address labels (each up to 960 labels long) without changing diskettes. It also works with Apple Writer III word processing software, letting you produce form letters quickly and conveniently.

#### PROFESSIONAL AND EDUCATIONAL RECORDS

ProFile lets doctors, dentists, lawyers, consultants, and other professionals store voluminous client records all in one place. Similarly, ProFile gives educators the convenience of single-disk storage for performance, attendance, and health records on thousands of students.

#### PRIVATE "BULLETIN BOARDS"

With ProFile you can even establish a large data base for providing up-to-the-minute information via telephone line to employees or customers in remote locations.

#### TRIPLE-TESTED RELIABILITY

Every ProFile Mass Storage System that Apple ships is first triple-tested and put through a far more strenuous workout than it's likely to get in actual use. The entire unit is test cycled at elevated temperatures to make sure it can perform random read, write, and seek operations reliably.

#### ENSURED DATA INTEGRITY

Our commitment to ProFile's reliability doesn't end with factory testing, either. It also includes a built-in provision for ensuring the integrity of stored data.

ProFile automatically scans all stored data whenever the unit is powered-up. During reading operation, if data errors are found, ProFile will attempt to correct these errors and automatically relocate good data.

As with all Apple computers and peripherals, ProFile is backed by a 90-day warranty. A renewable, one-year, ProFile Extended Limited Warranty is also available.

Specially-trained dealers worldwide will give you the same kind of service for ProFile as you get for all Apple products. Many of the more than 2000 Apple service centers worldwide are trained to service ProFile, and are always available with technical support and applications assistance for all Apple users.

#### ProFile PERSONAL MASS STORAGE SYSTEM

ProFile offers you a number of features and benefits in key areas that extend the power of your Apple III system, including:

##### CAPACITY:

- \* 5 million characters
- \* 35 conventional floppy diskettes
- \* 1200 full pages of text

##### SPEED:

- \* 10 times faster than conventional floppy disks



DATA INTEGRITY:

- \* Automatic surface analysis and error detection

RELIABILITY:

- \* Augmented through testing during manufacturing

UTILITY:

- \* Quiet, compact, lightweight

PRICE:

TITLE: QUICK & EASY DATA MASTER

PUBLISHERS NAME: ADVANCED SOFTWARE TECHNOLOGY, INC.

DESCRIPTION:

AN UNFORGETTABLE EXPERIENCE IN DATA MANAGEMENT

QUICK:

- \* Entry and access to all the data that your computer will ever store.
- \* The Data Base is written in unprotected basic so it can be quickly and easily modified.
- \* Hard Disk compatible with no changes.
- \* Quick search by multiple fields using separate ranges.
- \* No limit on the maximum number of records except disk space.
- \* Sorting is performed as data is entered.
- \* Simultaneous access and data transfer to multiple files.
- \* Use wild cards to search with.
- \* Over 100 math calculations possible per data base.

EASY:

Design & setup of your application with very sophisticated custom specifications.

- \* A/R Aging Report
- \* Inventory Re-Order Point
- \* Inventory Status
- \* A/P Cash Requirement Report
- \* Weekly Sales Log
- \* Salesman Commission Report
- \* Appointment Schedules
- \* G/L Trial Balance
- \* Customer Account List
- \* General Ledger
- \* Accounts Receivable
- \* Chart of Accounts
- \* Library Management
- \* Customer List
- \* Personnel/Client Files
- \* Grade Computations
- \* Restaurant Control Pkg
- \* Inventory
- \* Insurance Brokerage Pkg
- \* Medical Billing
- \* and many more .....

SPECIFICATIONS PER DATA FILE:

Maximum Field Size: 245

Maximum Fields: 200

Maximum Calculations: 200

Maximum Record Size: 3,000

Typical Access Time Under 5 Seconds!

PRICE: \$69.50

TITLE: QUICK FILE III

PUBLISHERS NAME: APPLE COMPUTER, INC.

APIII-24

**DESCRIPTION:** With Quick File III, a doctor, small business owner, homemaker, or scientist can quickly turn receipts, notes, lists, and schedules into coherent files and reports. Quick File III allows for simple arrangement of records in alphabetic, numeric, date, or time order and saves time and effort in producing repetitive reports, calculations, and corrections. Two types reporting formats- tables (rows and columns) and labels or index cards- can be easily created and printed.

**Quick File III...**

- allows the user to design forms to meet special needs;
  - allows categories to be added and deleted without retyping previously-held information;
  - can selectively search, display, and summarize records;
  - can view many records simultaneously;
  - can "talk" to Apple Writer III and other ASCII character files.
- "Quick File III is every person's information organizer, a real help to those who wish to be more efficient and productive, whatever their line of work," says Kris Olson, product manager. The program provides these additional convenient reporting features:
- calculates totals and subtotals of numeric information;
  - contains a calculated column (for percentages, the sum of two other columns, etc.);
  - allows for the choice of which rows and columns are printed and in what order.

**PRICE: \$100.00**

#### **TITLE: REPORT WRITER**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Report Writer is our most complete word processing system suitable for both business and professional applications. The system features an editing system unmatched by any other similar system anywhere and the ability to process almost endless volumes of test for contracts and reports.

The system includes its own built-in mailing list element and form letter preparation system. With these special elements you can automatically print customized form letters for those special sales programs or just to send a truly personalized holiday letter. The mailing list element allows you to create specially coded letters that you can use to keep track of hot leads or simply segregate the list into your own special groups.

The powerful endless text processor allows you to forget about the ends of your lines. Text automatically floats to fit your print specifications. Text created can be reformatted to any configuration you may later require. You can create mixed text with parts justified, parts free form, and parts centered.

**PRICE: \$249.00**

#### **TITLE: S.E.U.I.S.**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** S.E.I.O.S. (an acronym for Shoot 'EM Up In Space) is more than the name suggests. Players build ships from a choice of six prototypes to form squadrons and then make enough squadrons to form a fleet.

The game includes planets, some of which belong to the player at the start of the game and others which may be conquered. Planets, the source of new ship construction, can be varied in their productivity. Conquered planets can be used to build up reserves for reinforcements.

The strategic game, with all the planning and deployment will challenge every gamer. But when actual ship-to-ship combat occurs, the true arcade action demands quick reflexes and a sharp

eye.

S.E.U.I.S. offers a variety of scenarios, complete with two-player or computer-as-opponent modes. For a fast, arcade-like game, there is a real-time tactical combat scenario.

**PRICE: \$39.95**

**TITLE: SALES ORDER ENTRY III**

**PUBLISHERS NAME: PLAIN AND SIMPLE SOFTWARE**

**DESCRIPTION:** Sales Order Entry III is an order entry software package designed primarily for manufacturers, wholesalers, and sales representatives.

The main objective of the software is to provide an efficient, orderly method to keep track of orders, shipments, and payments. Depending upon the options chosen by the operator, the system will automatically calculate the total value of the order from the products shipped. It accommodates an invoice number, payments, last payment date, and commission information for each order.

The software will work with either two 5-1/4" disk drives or the Profile 5 MB hard disk system. The two drive system will maintain current and cumulative financial information for 25 salespeople, 50 vendors or principals, and 500 customers on on data disk. Up to 500 sales orders can be maintained on the other data disk, and the software will support multiple data disks. The capacities are made possible through use of variable length files, thus making the most efficient use of the data disks.

The software will produce a variety of printed reports, as well as an "End-of-Month" function. Monthly sales information is maintained and produced on a monthly report providing a monthly comparison over the period of one year.

Both the software and the instruction manual are designed to be used by the individual with no prior computer experience. The instructions and the operation of the software use a "common sense" approach, thus making it easy to install and operate the system. Future utility programs will be available that will interact with the system.

**PRICE: \$25.00**

**TITLE: SCRIPT III**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Add style to your printed Pascal text files. Script III allows you to format programs, documents - any text written using the Apple III Pascal Editor - with greater ease and flexibility than ever before.

This powerful program enables you to embed commands in your Apple III Pascal text files and get layout-perfect printouts every time. (You can also print Script-formatted files on the screen or save them on diskette.)

Script III works with a wide variety of Apple III-compatible dot matrix and impact printers. With it, you can: designate line spacing, margins, and page breaks; paginate using headers or footers; underline, center-, left-, and right-justify text; and much, much more.

Now you can produce attractive, easy-to-read Pascal documents and program listings - custom-tailored to your specifications with Script III.

**SCRIPT III:**

- \* speeds recognition of bugs while you're debugging programs, because it enables you to print Pascal procedures on individual pages and underline keywords within them;
- \* lets you selectively print any portion of Apple III Pascal text files, so you don't waste time and diskette space re-saving

small text segments;

- \*allows you to "chain" text files together for uninterrupted printing;
- \* gives you the option of saving formatted text files to diskette, letting you generate attractive, highly readable printouts directly, with the Apple III Pascal Filer and Editor;
- \*allows you to represent multiple command sequences with simpler, single macro commands, so you streamline print instructions that can be quickly embedded over and over again.

Script II is extremely easy to use. Simply load the program into memory, and insert your Apple III Pascal diskette in the Apple III's built-in disk drive. Script will read the file you indicate, executing your print formatting commands.

Script III offers a wide range of options that enables you to output formatted files to the screen, to diskette, or to an Apple III-compatible printer.

**PRICE: \$125.00**

**TITLE: SERVICE CHARGE ANALYSIS AND PRICING MODEL**

**PUBLISHERS NAME: DATA SYSTEMS, INC.**

**DESCRIPTION: FEATURES:**

1. Allows managers of financial institutions to fine tune their service charge structure in order to increase profitability without a significant reduction in customers. Provides for stratification of customer base by average or minimum DDA balance, and allows user to determine the effect of pricing decisions.
2. Installation may be handled completely by the user. No computer expertise necessary. DSI will provide assistance over the phone.
3. Apple III computer, two 5 1/4" floppy disk drives, one video monitor, one 132 column printer, one parallel or serial printer interface card, one disk controller card.
4. One thousand dollars per model. Quantity discounts are available for customer who purchase more than one of our products. Optional \$100.00 annual maintenance fee qualifies customer for annual updates and improvements to original model.
5. Applesoft BASIC; software is compatible with computers manufactured by Apple Computer, Inc. only.

**PRICE: \$1000.00**

**TITLE: SMART**

**PUBLISHERS NAME: SOFTWARE RESOURCES, INC.**

**DESCRIPTION:** Computers have enormous promise for the serious investor. You own computerized charts, automatically updated each day. Fast, easy portfolio pricing. Instant analysis. And many other advantages.

Packed in to the SMART (Securities Market Analysis, Reporting, and Transactions) System is everything you need, all in one remarkable desktop computer system that fits into both your office and your budget.

The SMART Analysis and Graphics System is software package for the Apple III computer and comes ready for instant use.

We invite you to explore with us the remarkable advantages SMART can bring you.

**ANALYSIS AND GRAPHICS FEATURES:**

- Open-High-Low-Close/Volume/Open Interest Charting
- On-Balance Volume
- Date Scales for Daily, Weekly, Monthly, Quarterly or Annual Data
- Choice of Scale Types (Arithmetic or Semilogarithmic)
- Trend Lines



- Moving Averages
- Exponential Smoothing
- Regression Analysis

AUTOMATIC CHARTING. SMART graphically presents all types of market and economic data in clear, easy to read graphic formats. These are done both on the computer screen and on paper. The formats are of your own choosing.

DAILY UPDATING. SMART retrieves market and price data from a national service using your phone lines. Its files are always as up to date as yesterday's closing figures. (You may also enter data manually if you wish.)

COMPUTER ANALYSIS. You tell SMART what you want - things like moving averages, on-balance volume, statistical analysis - by touching one or two buttons. The rest is all automatic, performed at speeds you'll never match.

ACCOUNT MONITORING. SMART maintains your account positions and links them to market price/data for daily account monitoring and reporting.

MACRO CONTROL. With this important feature, once you've instructed SMART to produce a complex chart, you can repeat the operations for other variables with the touch of a single button.

NETWORKING/HARD DISK. With these options SMART gives big computer capability to the Apple. Even more speed, storage, and flexibility are available plus the ability to share data and programs among many computers.

EXPANDABILITY. SMART Analysis and Graphics is the first of several important and integrated products to assist you in the investment process.

YOU GET FACTS AND FIGURES FASTER. Everything you need in the way of charts and analyses appears quickly on the screen or on paper, in just the format you want.

YOU'RE BETTER INFORMED FOR DECISIONMAKING. When you need the facts, SMART responds quickly, reporting them in clear, crisp graphic formats that are complete, informative, and easy to read.

YOU'RE FREE FOR MORE IMPORTANT MATTERS. That's where efficiency comes in. You'll get more done in a day.

YOU ELIMINATE CHARTMAKING. Instead, SMART does it all automatically at the push of a button, releasing you from the time-consuming business of doing them by hand.

YOU CAN GENERATE THE FOLLOWING:

- Moving Average Systems
- Overbought/Oversold Oscillators
- Relative Strength Indicators
- Trading channels
- Price-Volume Studies
- Commodity Spread Analyses
- Stock Beta Values

IMPORTANT FEATURES OF ACCOUNT MONITORING:

- Master Reports
- Appraisal Reports
- Gains and Losses Reports
- Cost Basis Reports
- Choice of screen or hardcopy output, ranging from summary level to detail security lot reporting.
- Handles equities, fixed income securities, mutual funds, options, Treasury bills, and money market funds, including long and short positions.
- Automatic price updating at a low monthly charge.
- Multiple account capability.

Software Resources, Inc. developed the SMART system in conjunction with a leading financial institution. Software Resources is a service oriented company which provides its customers with many forms of on-going support. Subscribers to the SMART service are continually updated as enhancements and additions are re-

leased, and will receive informative newsletters.

**PRICE:**

**TITLE: SOSCLOCK III**

**PUBLISHERS NAME: SYSTEM FABRICATORS**

**DESCRIPTION:** SOSCLOCK III is designed to provide fully SOS compatible clock and calendar functions for the Apple III. Installation of the SOSCLOCK III permits the use of all SOS time and date intrinsics as they were originally intended.

The kit supports the set time and get time SOS utility management system calls, providing full interface on the operating system level. This allows complete clock and calendar function at the user level without the need for peripheral electronics or user program subroutines.

Apple III SOS will read the time and date from the SOSCLOCK III automatically to provide: automatic stamping of volume directories with the current date and time, use of the reserved variables times and dates in Apple III Business BASIC, use of the procedures date, time of day and settime in Apple III Pascal, and full implementation of the system calls set time and get time.

SOSCLOCK III is a complete kit containing a clock/calendar IC, backup battery assembly and comprehensive owner's handbook. The IC mounts in a socket provided on the Apple III motherboard. the battery case mounts just under the Apple III top cover, allowing easy user access for battery replacement.

**PRICE: \$60.00**

**TITLE: SUPERPLOT**

**PUBLISHERS NAME: MICROWARE ASSOCIATES, INC.**

**DESCRIPTION:** Superplot is a program which enables you to easily create a variety of colorful, informative charts and graphs. The information you wish to display is first entered (as co-ordinate pairs) via the user-friendly editor. Data may also be transferred from Visicalc III worksheets, or generated from a user program.

Superplot then displays the graph in the format that you specify. Its powerful graphics editor makes it easy to enhance the appearance of the resulting graph by doing such things as adding titles and labels, changing the scaling or coloring, and altering the format in many other ways. Graphs can easily be saved on diskette for use in Superplot Slide Shows or for other applications. Graphs can also be printed whenever desired.

**PRICE:**

**TITLE: SURVEYOR'S AIDE**

**PUBLISHERS NAME: HARRISONBURG COMPUTER SERVICES**

**DESCRIPTION:** "Surveyor's Aide" surveying software for microcomputers will run on an Apple III (in native mode with Business Basic) or the IBM Personal Computer. It allows the surveyor to do all major coordinate geometry calculations as well as traverse closure. Although "Surveyor's Aide" is a complete surveying system, each surveyor has a differing needs. Because of this "Surveyor's Aide" was programmed with adaptability in mind. Harrisonburg Computer Services will modify any section of the program for a small additional charge to accommodate each user. "Surveyor's Aide" is also listable and modifiable.

**PRICE: \$500.00**

**TITLE: THE AGRICULTURAL SOFTWARE PACKAGE**

**PUBLISHERS NAME: AG\*PAC**

## **HARDWARE REQUIREMENTS: dual drives, Pascal, language card**

### **DESCRIPTION: LIVESTOCK ENTERPRISES**

**LEAST COST RATION, DAIRY CATTLE** - With these programs, you can calculate a nutritionally correct ration from farm grown and purchased feeds at the least possible cost. Over 19 feeding rules are observed absolutely. You can do this for individual cows based on their production and butter fat test, for a group of cows or for an entire herd on a production basis. Correct rations for nine different classes of growing heifers can also be determined at least cost. The savings in feed costs are potentially enormous. The increased production can be even more significant.

**LEAST COST RATION, BEEF CATTLE** - This program applies the sophisticated methods of "linear Programming" to calculate a least cost ration for various classes of beef cattle. Rations are tailored to the sex and size of the animals being fed. Now you can use the same techniques that the 25,000 head feedlots use to maximize their profit on livestock feeding. Perfectly balanced rations can be obtained from farm grown feeds within minimal supplements - often no purchases feeds other than minerals.

**FEEDER PIG PRODUCTION** - Twenty-one variable costs are evaluated to arrive at a "Profit matrix". This is a table which will show you what price and production levels will insure profit or loss.

**PASTURING STOCKERS** - Evaluates 15 variables to print out an extensive pro forma and profit matrix. You know exactly what you are getting into when you try this popular enterprise.

**COW/CALF OPERATION** - Evaluates 18 costs and benefits and produces a pro forma P & L as well as a price vs. calf weight profit matrix with an alternative P & L matrix the contingency that you shut down the enterprise and sell the cows as well as the calves.

**BARREN BEEF COW DECISION** - If you have less than a 100 percent calf crop, you must decide what to do about barren beef cows. The decision is based on eight price weight and interest variables. A correct decision pays for a computer the first day.

**DAIRY HERD REPLACEMENT** - Raising replacement dairy heifers has many advantages for a diversified farm operator. This program produces a pro forma which can help you obtain financing and a profit matrix which will show you the price/production combinations under which the enterprise will be profitable.

### **CROPS & MARKETING**

**CASH CROP PROFIT MATRIX** - By calculating the net profit for every combination of production and price, you can evaluate your chances of making a given profit level.

**PRICING GRAIN** - There are 24 variables involved in deciding whether to accept a local offer on the one hand or to take discounts and incur the costs of storing, drying, and trucking. The program does this for you for every conceivable discount and pricing schedule.

**CROP SHARE RENTS** - Evaluates the complex trade offs between operating you own acres and renting to others for various shares of the crop and various shares of the inputs. Tells you where the break-points are on the profit-risk curve.

**TRUCKING GRAIN** - Enables you to figure whether you would be better off renting or buying equipment, hiring drivers, and incurring other costs vs. having your grain hauled by a trucking firm.

**FUTURE HEDGING** - Computes the cost of hedging for various changes in the commodity price. Figures the interest cost of maintaining the hedge as well as the line of credit necessary to maintain the hedged position. How to anticipate and avoid disaster.

**TECHNICAL TRADING SIGNALS** - Implements the market savvy necessary to "read" the charts showing changes in price, volume, and open interest of any commodity.



**SHRINK CALCULATIONS** - Gives you an independent calculation of the "shrink". It also computes the "premium" you don't get for over-drying grain. Shows how much you can increase your profit by blending wet corn with over-dried corn.

**SOYBEAN SPREADS** - Takes a complicated and little known commodity speculation and computes the "crush margin" automatically for one or more of the 8100 possibilities. Records your positions once taken and keeps tabs of your ongoing profit or loss. four programs do the housekeeping.

**MORTGAGE BALANCE** - Given the terms of a mortgage, calculates the balance after a specified number of payments.

#### **REAL ESTATE INVESTMENT**

**REAL ESTATE INVESTMENT ANALYSIS** - Instead of spending days of tedious calculation to evaluate a farm purchase, you can do it in minutes. You can change terms and price offer without having to retype the other 18 to 20 items of information needed to evaluate the investment. Three pages of output computer significant real estate ratios, calculate tax shelter, inflationary transfer, project cash flow and equity growth for 10 years. Results are discounted for time, taxes, and inflation in every conceivable combination. With this program, you can easily find farm investments that will yield a 1,000 percent first year return on capital investment.

**LEE'S FORMULA** - Prof. Warren Lee's capital budgeting formula for land valuation is so complex it would take weeks to evaluate by hand. You can do it in seconds with this program and position yourself to snap up underpriced farmland. Find what the effect of improved terms will be. Those you negotiate with are in the dark if they don't have this capability.

**POPULATION PRESSURE** - You can find underpriced land with maximum development potential. When you enter the location and population of all the towns in your area, the program will generate a contour map clearly delineating areas with development potential. Once you have a population pressure map, you are as well prepared to negotiate as someone who has spent years developing a feel for development potential. It's a tie breaker between other wise equivalent properties.

**RENT ESCALATOR** - This program enables you to develop the fairest of all rent escalators by tying rent arrangements to the prices of as many agricultural commodities as you desire.

#### **FINANCIAL MANAGEMENT**

**AMORTIZATION PAYMENTS** - Elwoods's Tables that never get out of date. Calculate the payment necessary to retire a loan. No limitations on interest rate, number of payments per year, or years to repay.

**ADDING MACHINE** - Like a conventional adding machine, the program generates a tape which can be displayed on the screen or printer. Unlike an adding machine, each item can be identified so the output is an itemized list with totals.

**PRESENT VALUE** - Uniform, irregular, balloon, or amortization payments can be discounted to present value and also discounted for inflation.

**INTERNAL RATE OF RETURN** - The most universally accepted and accurate method for evaluation of investments and deals of all kinds. A fast binary algorithm computes the IRR from the table of benefits and contributions you enter.

**REFINANCING A MORTGAGE** - Calculates the true cost of the money you obtain by refinancing farm or other property to obtain locked-in equity.

**WRAP-AROUND MORTGAGE** - Computes an alternative method of refinancing which may cost half as much as the conventional method of paying off the old mortgage.

**PURCHASE OF A CERTIFICATE OF DEPOSIT** - It can pay to borrow money to buy a CD! This program calculates when and what earnings are



realized.

APPRECIATION RATE - By calculating the rate at which prices have increased in the past, you can project what farmland or commodities will sell for in the future. The program enables you to do both.

#### SOME AG/PAC FEATURES

REAL WORLD ROOTS... These are the decision-making and number crunching programs behind the growth of Wisconsin's "Cold Comfort Farms" from 300 to 4200 acres in 15 years.

PASCAL LANGUAGE... this powerful modern language makes it easier to write "bug-free" programs from the top down. It has the structures and commands necessary to write massive programs on a microcomputer. The existence of predecessor programs on main frame and mini-computers gave a cross-check on the calculations.

DATA RECALL - A program may require entry of 24 or more items of numerical data. If you make mistakes, AG/PAC lets you correct them without re-entry of the correct items. If you decide to re-run with a few changes you won't have to retype all 24 entries. AG/PAC remembers...even if you shut off the computer! The next time you run the program, the data from the last run is still there and will be displayed on the screen for revision.

PROFESSIONAL POLISH - AG/PAC programming doesn't stop with the answers. Only when everything possible has been done to improve the ease of data entry, output formatting legibility, error proofing and versatility was the program considered finished.

"PRETTY-PRINTED" OUTPUT - The printout looks like it was typed by the president's secretary, not like a jumble of numbers only intelligible to the initiated. AG/PAC prints \$1,234,567.89 just like that! Not 1.23E+6. You can show it to your lender or photocopy it for a customer report without retyping. It's "camera ready copy".

AUTOMATED DATA ENTRY... the most tedious data entry has been done for you. Nutritional requirements for livestock, over 2000 items of feed analysis, tax information, you never have to enter this data in a program because AG/PAC "looks up" what it needs.

3-D THINKING WITH "PROFIT MATRIX" PRINTOUT - Although you enter the price and production you guesstimate when the program prints the profit to be expected, it prints an entire table for a 30% spread about the expected production and price.

INFLATION-PROOFED...you can take inflation into account in all your financial dealings. The classical formulas for present value and appreciation have been revised to enable you to calculate in present day dollars discounted for time and inflation...taxes, too, in some cases.

SOPHISTICATED TAX PLANNING...no program assumes you are in a "tax bracket". Buy a new farm and you can slide down a half-dozen brackets...to zero even. AG/PAC consults the latest tax tables in computing tax effects, sometimes as many as three times a year to get tax calculations accurate to the penny.

NUTRITIONALLY PERFECT RATIONS AT THE LEAST POSSIBLE COST...the LP algorithm satisfies up to 19 built-in rules; plus as many as two additional constraints on each feed; plus any additional requirements you want to insert. Then it balances the ration according to the latest results of feeding trials or daily nutrition research at the least cost. It uses feeds you have on hand or can readily buy. Over 200 feeds and their analyses included. Add your own feeds and analyses. There are separate programs for dry or lactating cows, single animal or milking herd. Calculate the changing rations for nine classes of young stock in one blockbuster program. It even specifies the formula for a batch of mill mix with prices by ingredient and prints out the purchase order...with an extra copy for your files!

SOLVES THE "DUAL LP" PROBLEM...tells you what omitted feeds have to sell for to get included in the ration formulation.

**SELF-DOCUMENTED** - There is nothing to look up. The programs themselves walk through with explicit prompts. They even reject wrong responses! The 180 manual is lively background reading full of practical advice on application of the programs to everyday situations.

**BUILT-IN TABLES**...amortization, feed and tax tables are instantly available.

**PRICE:**

**TITLE: THE APPLE III INFORMATION ANALYST**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** The Apple III Information Analyst is a highly integrated, personal computer system designed especially for professionals who work with facts and figures. It is built around the power and flexibility of the Apple III computer, with its big, 12-inch (diagonal) video monitor, 80 character, upper/lower case display, and high-resolution, color graphics capabilities. Other important features include a calculator-style, numeric keypad, built-in disk drive and clock/calendar, and integrated system interfaces for quick, inexpensive expansion when your needs require it.

The Apple III Information Analyst comes complete with two versatile software packages: Apple Business BASIC, and VisiCalc III. Apple Business BASIC-Apple's advanced, multifeatured version of the popular BASIC language-handles complex business, scientific, and engineering programming with speed and precision. VisiCalc III, the "electronic worksheet", lets you solve any problem that can be organized into rows and columns quickly and accurately.

More than a worksaver, the Apple III Information Analyst gives you the competitive edge you need to excel as a professional in budgeting, forecasting, scheduling, accounting, and other critical business and program management areas.

**THE APPLE III INFORMATION ANALYST...**

Increases your productivity by providing a variety of features and programs that dramatically reduce the amount of time required to perform routine tasks... Reduces your programming time, because its feature-packed Apple Business BASIC language lets you write long, complex programs with maximum efficiency...Extends your decision-making capabilities, because its VisiCalc III software lets you ask "What if...?" questions, and instantly calculate the results of different approaches to planning and modeling problems...Increases the value of your time, because its powerful, problem-solving and worksaving benefits give you marketable advantages over competitors.

The Apple III Information Analyst is designed for the professional manager who can't afford to waste time - or make mistakes on important decision. Human-engineered for ease-of-use, the Information Analyst's handy, integrated keypad lets you quickly enter large blocks of figures and data. And the sculptured, typewriter-style Apple III keyboard incorporates several editing and cursor movement features that make it easier to enter text and write programs.

The real strength of the Apple III Information Analyst lies in its powerful software. You can use Apple Business BASIC to write programs tailored to your needs. And you can use VisiCalc III to prepare marketing forecasts, budgets, pricing strategies, and more.

To preserve your data, the Apple III Information Analyst incorporates a number of convenient, built-in features, including a disk drive. Highly reliable, it lets you store and quickly retrieve up to 140K bytes of data per diskette. And as your needs expand, you can daisy-chain up to three additional,

external drives to your system, without adding any control hardware or software.

Another handy, built-in feature of the Apple III Information Analyst is its clock calendar, which conveniently date stamps your files - thereby providing an especially useful way to distinguish among revisions. Also, programs with calculations that incorporate the current date or time (interest calculations, for example) can be designed to access the system directly for the data, instead of requiring an operator input. The clock/calendar has its own long-life batteries, so the system stays on time, even when it's unplugged.

When you're ready to print your forecasts, budgets, schedules, mailing labels, and other documents, the Apple III Information Analyst performs with letter perfect results. One of its built-in printer ports lets you simply plug in and print with Apple's quiet reliable Silentype thermal printer. And another built-in printer port lets you easily connect your Apple III Information Analyst to a wide variety of high-speed printers.

Whether you're an engineer modeling with computer simulations, or a marketing manager preparing five-year sales forecasts, the Apple III Information Analyst can save you time, improve your results, and polish your professional image.

#### KEYBOARD/KEYPAD:

Textured, non-glare, non-slip keytops, with raised dots on "D", "K", and "5" keys for quick positioning; separate numeric keypad for calculator-style numeric entry.

#### DISPLAY:

12" high-resolution, video monitor, with up to 24 lines of 80 characters/spaces, and upper/lower case; color and high-resolution graphics capabilities for plotting, graphs, and other applications.

#### STORAGE:

System supports up to four, daisy-chained disk drives (including the Apple III's built-in unit), for a total of 560K bytes.

#### APPLICATIONS SOFTWARE:

Apple Business BASIC and VisiCalc III, written in Apple III assembly language. With your Apple III Information Analyst order, you will receive:

##### OPTION A

- Apple III Professional Computer System, with built-in disk drive, keyboard and numeric keypad, clock/calendar, serial (RS-232) and Silentype printer interfaces, and 96K bytes RAM (128Kbytes optional);

- Apple's Sophisticated Operating System (SOS) package, with: System Owner's Guide; System utilities diskette; Standard Drivers Manual; DOS 3.3 diskettes; DOS 3.3 instruction manual.

- Apple Business BASIC programming software package with: Business BASIC diskettes; Instruction manual.

- VisiCalc III software package, with: VisiCalc III diskette; VisiCalc III manual; Toolkit sampler diskette (prewritten VisiCalc III worksheets to help you get started); Toolkit sampler manual.

- Apple III Monitor (black & white);

- All necessary cabling, accessories, and blank diskettes to put your system to work immediately.

##### OPTION B

Same as Option A, plus:

- Second disk drive (Disk II for Apple III).

##### OPTION C

Same as Option A, plus:

- Second disk drive (Disk II for Apple III);

- Apple Silentype thermal printer.

#### PRICE:



**TITLE: THE APPLE III WORD PROCESSOR**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Available second quarter 1981. The Apple III Word Processor is a sophisticated personal computer system designed especially for word processing. Its Word Painter software allows you to create and edit letters, memos, reports, manuals - even books - quickly and easily. And its Mail List Manager software helps you communicate more effectively with customers and business associates by making it easy to create, store, update, and print mailing labels, and address and phone lists. The 80-character/line, upper/lower case display gives you an accurate picture of what your text will look like when it's printed, while the system's sculptured keyboard makes the transition from a typewriter smooth and simple.

Reliable, powerful, and reasonably priced, the Apple III Word Processor will help you streamline clerical operations and improve productivity from the minute you turn it on.

**THE APPLE III WORD PROCESSOR...**

- Simplifies document formatting, because its large 80-character/line by 24-line display gives you an accurate picture of what your printed documents will look like...

- Minimizes training by providing a natural transition from the standard typewriter...

- Increases your efficiency, because of its convenient, built-in disk drive...

- Maximizes your word processing productivity, because of its powerful Word Painter software...

- Reduces expansion costs, because up to three external disk drives can be added without additional control hardware or changes in software...

- Makes data retrieval easier, because its built-in clock calendar automatically identifies disk files with the correct date and time of their creation or last revision...

- Saves you money, because its cost-effective Mail List Manager program lets you inexpensively create, sort, update, and print mailing labels and phone lists...

- Increases system flexibility, because of its compatibility with a variety of draft- and letter-quality printers.

Tools are as useful as they're usable - and the Apple III Word Processor is the first personal computer human-engineered for word processing. The sculptured, typewriter-style keyboard is a model of utility and convenience, with a familiar layout and some special features that allow you to move almost effortlessly from point to point in the text.

At the heart of the Apple III Word Processor is Word Painter, Apple's powerful word processing software. With Word Painter, you can perform normally time-consuming operations - such as centering, indenting paragraphs, searching for and replacing text - quickly and automatically.

To preserve your documents, the Apple III Word Processor incorporates a number of convenient, built-in features, including a floppy disk drive. This highly reliable disk drive lets you store - and quickly retrieve - up to 14K bytes of data per diskette. And as your needs expand, you can "daisy-chain" up to three additional, external drives to your system, without adding any control hardware or software.

Another truly convenient feature of the Apple III Word Processor is its built-in clock/calendar, which automatically date/time stamps files, records when a letter is written, and notes (per your instruction) whether a particular draft is the final one. The clock/calendar has its own long-life batteries, so the system stays on time, even when it's unplugged.

When your documents are ready for printing, the Apple III Word



Processor makes your job simple, and ensures that the results are letter-perfect. For draft-quality printing, Apple's Silentype thermal printer is quiet, reliable, and cost-efficient - and plugs directly into the Apple III. For letter-quality printing, you can choose from a number of different printers - including Apple's popular daisywheel model (Qume Sprint 5). Because many printers offer a variety of type fonts, you can tailor your documents quickly and easily for the "look" you want. The Apple III Word Processor - the affordable answer to your word processing needs.

**KEYBOARD:**

Textured, non-glare, no-slip keytops, with raised dots on "D" and "K" keys for quick positioning; Alpha Lock shifts and locks alphabetic characters only, leaving all other keys unaffected.

**DISPLAY:**

12" high-resolution, video monitor, with up to 24 lines of 80 characters/spaces per line, upper/lower case, and high resolution graphics capability.

**STORAGE:**

Approximately 60 pages of text per diskette; system supports up to four daisy-chained disk drives (including the Apple III's built-in unit), for a total of 560K bytes.

**APPLICATION SOFTWARE:**

Word Painter, written in UCSD Pascal and Apple III assembly language; Mail List Manager, written in UCSD Pascal.

With your Apple III Word Processor order, you will receive:

- The Apple III Professional Computer System, with built-in disk drive, keyboard, clock/calendar, serial (RS-232) and Silentype thermal printer interfaces, and 128K bytes RAM;

- Apple's Sophisticated Operating System (SOS) package, with: System owner's guide; System utilities diskette; Standard drivers manual;

- Word Painter software package, with: Word Painter diskettes; Word Painter instruction manual; Word Painter keycap set and keycap installation tool;

- Apple's Business BASIC programming software package, with: Business BASIC diskettes; Instruction manual;

- Mail List Manager software package, with: Mail List Manager diskettes; Instruction manual.

- Second disk drive (Disk II for Apple III);

- Apple III Monitor (black & white);

- Apple Silentype thermal printer (OPTION A); or

- Qume Sprint 5 daisy-wheel printer (OPTION B);

- All necessary cabling, accessories, and blank diskettes to put your system to work immediately.

**PRICE:**

**TITLE: THE COSMIC BALANCE**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** THE COSMIC BALANCE reaches new frontiers in the universe of space games. Each player assumes the dual role of commander and architect of a starship fleet. For a ship of given size, the various parameters and trade-offs include: engine (for power), drives (for speed and maneuverability), weapons (such as phasors, disruptor bolts, plasma torpedoes, seeker missiles and unmanned fighter swarms), defense belts, shields, transporters and space marines.

There is a crew efficiency factor which affects the ability of a ship in battle. Ships with greater hull space have more room for recreation, allowing for greater crew morale and efficiency.

There is no best ship in this game; only one designed with optimum compromises to suit a player's style of warfare.

As sophisticated as this game is, a typical game can be played in

as little as ten minutes. Whether you play the two-player or solitaire scenario, you'll be thrilled and amazed at the semi-automated graphics and rapid execution of ship-to-ship combat.

PRICE: \$39.95

**TITLE: THE HARDISK ACCOUNTING SERIES**

**PUBLISHERS NAME: GREAT PLAINS SOFTWARE**

**HARDWARE REQUIREMENTS: 5 megabyte hard disk, 132 column printer**

**DESCRIPTION:** The Hardisk Accounting Series from Great Plains Software is a financial accounting and management series. Designed to assist the business manager, the Hardisk Accounting Series does more than just provide the techniques for accumulating data. This Management Information Series records, sorts and summarizes data and prepares the data in formats that allow for accurate business analysis. Due to this important feature, today's business manager now has the ability to evaluate his business from every aspect and make his important management decisions based on accurate, concrete information supplied through a comprehensive accounting system.

Written in UCSD Pascal, the Hardisk Accounting Series currently operates on the Apple III and is designed exclusively to run on a hard disk system. Modules available at the present time are General Ledger, Accounts Receivable and Accounts Payable. Other modules to be released in 1982 are Payroll and Inventory with Point of Sale.

The General Ledger Module of the Hardisk Accounting Series is the essence of the accounting series. By using standard accounting practices and procedures, users will find it easy and convenient to establish their General Ledger Chart of Accounts. Entries are simple because the system automatically eliminates any unnecessary re-entry of information and allows for easy tracing of transactions through comprehensive audit trails. Accurate management and evaluation of inventory is made easy with this module of the Hardisk Accounting Series. Whether users have a small inventory with few items or a large inventory with many, users are ensured complete efficiency through five different methods of inventory valuation.

The Inventory Module effectively supports sales and management. By automatically calculating the right price level and quantity price for customers, clerical work is reduced significantly. By suggesting substitution or backorder for out of stock items, time is saved by sales people.

Through the use of the Payroll Module of the Hardisk Accounting Series, the tedious payroll processes are eliminated. This sophisticated Payroll program is guaranteed to improve management by providing accurate and up to date personnel information, increase efficiency by allowing flexibility in deductions, departments and job descriptions, and save valuable time through production of W2 and 941 reports.

Payroll features up to 9999 employees with more than 25 fields of data that can be recorded for each individual. Adding or changing data is easy and allowed at any time. Flexibility with employee statistics is provided because the system allows up to 20 different pay types, 20 deductions, and 5 tax withholdings for each employee. Demographic and financial information is separated to insure A confidentiality.

Effective cash management is made easy with the Accounts Payable Module of the Hardisk Accounting Series. Users of this program will be pleased with its tracking ability - of total invoices received from vendor, minimum order amounts, notification of which General Ledger accounts should be affected by specific entries, and delight with its ease of operation. Paperwork is significantly reduced because of check preparation and data entry

errors are effectively controlled by notifying operators of the last five entries when making transactions and credit memos. The Accounts Receivable Module features up to 9999 customers. Users can add, change, and delete customers at any time but are not allowed to delete any customer with a balance. Accounts Receivable allows for either balance forward or open item handling of each customer and will automatically check customer's balances against credit limits. The system allows for posting to any General Ledger account and invoices can be distributed to 16 different General Ledger accounts. Special features of Accounts Receivable include the ability to enter full or partial payments and the ability to apply cash to all invoices of just specific invoices. The system also allows users to apply finance charges to overdue accounts and automatically identifies slow payers, aiding cash flow situations within the business itself. A CRT Account File Inquiry Screen lets users quickly check the status of any customer and the Open File Reference summarizes the numbers and dollar amounts of balances, invoices, service charges, debit memos, payments, finance charges and totals net amount of receivables.

**PRICE:**

**TITLE: TRANSCRIBE**

**PUBLISHERS NAME: QUARK ENGINEERING**

**DESCRIPTION:** Transcribe is a spooler designed for use with the Apple III and a hard disk such as the Profile or Corvus hard disk. When the spooler is used, printer output is sent to Transcribe rather than directly to the printer. Transcribe writes the output onto the hard disk (generally a fairly fast operation). Once the entire report has been put on disk, control is returned to you. You can then continue using the computer for other tasks. Transcribe will send the output from the disk to the printer without interrupting you.

If you print lengthy reports and are tired of waiting for the printout to complete before you can continue using your Apple, then Transcribe is probably for you. Transcribe works with most Apple III software. The actual time you gain will depend on the efficiency of the program producing the output.

Transcribe works with any printer connected to the serial port (if it uses the PRINTER driver). It also works with printers connected via Apple's Universal Parallel Interface Card. It will not work with the Silentype printer or a printer connected with any other interface card (such as Pkaso from Interactive Structures). It also assumes that all reports are printed on continuous form paper. You cannot do sheet fed reports using Transcribe.

Transcribe consists of four basic parts. The first part is a compatible replacement for the normal Apple III console driver. The second is a compatible replacement for you parallel and serial printer drivers. The third is the spooler driver itself. And the fourth is a spooler status module.

The spooler can queue up to 14 reports for printout. You may also have a form feed character automatically inserted at the end of each report to guarantee that the next report will start at the top of a page.

The spooler status module (SPOOLSTATUS) is a 4K driver which may be added to give you additional capabilities. When SPOOLSTATUS is installed, you may access a special spooler status screen by pressing CONTROL SHIFT ESCAPE. The SPOOLSTATUS screen tells you the number of reports in the spooler queue (if you are using Word Juggler, it also tells the names of the reports). If the spooler has encountered any errors, you are also informed about these.

SPOOLSTATUS also gives you an opportunity to edit the contents of



the spooler queue. You can delete any report from the queue. Even the report currently being printed. It is also possible to restart the printout of the current report in case the printer jams.

When SPOOLSTATUS is installed, you can have the spooler stop between each report if you so desire. This allows you to change or readjust your paper.

PRICE: \$125.00

**TITLE: TYPEFACE**

**PUBLISHERS NAME: QUARK ENGINEERING**

**DESCRIPTION:** TypeFace is an accessory for Word Juggler which allows it to communicate with computerized typesetting equipment. Documents prepared using Word Juggler can be sent directly to many typesetting machines thus eliminating re-keying errors while reducing your costs.

A document formatted for the typesetter may be sent over a modem or over a direct RS232 connection. It may also be stored directly on disk. Even if your typesetter only has the capability to read Apple II disks, a program is available (from another company) to transfer TypeFace files to a standard Apple II disk.

TypeFace integrates directly with Word Juggler. It may be invoked with the touch of a button (actually, CLOSED APPLE 9). If you are sending a document via RS232, you enter a simple "terminal" program. You may log into the typesetting machine (if that is required), and the document may be sent with a single keystroke.

Most normal Word Juggler formatting commands are transported into a form that can be readily understood by typesetting equipment. Commands such as CENTER, start bold printing, etc. are converted into special user definable sequences. These sequences may even be redefined in the middle of a document. Special commands can also be sent to the typesetter. These special commands are ignored by Word Juggler. So you can still print your document without getting typesetter commands imbedded in the text.

TypeFace can also be told that a certain section of a document is a table. It will then translate long runs of spaces into tabs. Those Word Juggler formatting operations which can only be performed by the typesetter (such as deciding where to break lines) are disabled by TypeFace. This means that TypeFace is not aware of where pages break. Thus, you give up page numbering, headers and footers.

Commands ignored by TypeFace:

TEXT  
10 PITCH  
12 PITCH  
15 PITCH  
PAUSE  
PRINTER CONTROL  
NEED  
INDENT  
NEW PAGE  
PAGE LENGTH  
TOP MARGIN  
LENGTH  
LEFT MARGIN  
WIDTH

Sequences programmable by TypeFace

PREAMBLE (Sent before start of document)  
POSTAMBLE (Sent at the end of each document)  
EOS (Sent at end of sentence)  
BLANK (Sent for blank line)



PINDENT (Sent for paragraph indent)  
EOP (Sent at end of paragraph)  
RAGGEDRIGHT  
RAGGEDLEFT  
JUSTIFY  
CENTER  
SINGLE (Indicates single space)  
DOUBLE (Indicates double space)  
TRIPLE (Indicates triple space)  
NORMAL (Not bold or underlined)  
UNDER (Underline on)  
BOLD (Bold on)  
BOTH (Both bold and underline on)  
STARTSUPER (Start superscript)  
ENDSUPER (End superscript)  
STARTSUB (Start subscript)  
ENDSUB (End subscript)  
SPACES (Used for TABs in tables)  
**PRICE: \$175.00**

#### **TITLE: VERSA FORM**

**PUBLISHERS NAME: APPLIED SOFTWARE TECHNOLOGY**

**HARDWARE REQUIREMENTS: Two disk drives**

**DESCRIPTION: GENERAL DESCRIPTION**

Using the familiarity and structure of business forms, VersaForm quickly automates the handling of transaction information typical of most business and professional environments. VersaForm allows users to emulate existing paper flows and procedures, further extending the utility of personal computers to everyday application.

#### **A TRUE BUSINESS FORMS PROCESSOR**

Unlike data base management systems, VersaForm requires little understanding of data processing, its concepts, procedures or data storage technology.

VersaForm incorporates both the higher level data structures and the procedural familiarity of current business and professional forms. The result is a powerful, easy to use system that allows users to focus on getting specific paper handling jobs done, without being involved with the technical problems of traditional data processing.

As a true BUSINESS FORMS PROCESSOR, VersaForm allows you to concentrate on streamlining your paper operation while increasing operator accuracy. The key to VersaForms's power lies in its inherent simplicity both in system set-up and in daily operation.

#### **A FRIENDLY, EASY TO USE SYSTEM**

VersaForm was designed with a graduated function approach that allows users of all skill level to use the system. A key innovation, however, is the capacity for a knowledgeable manager or administrator to design a near foolproof system that less skilled staff can use. Such a system can incorporate the insight of skilled administrators while allowing those less skilled to take advantage of the designer's knowledge. Even sophisticated business forms applications like multi-vendor bids and multi-item purchase orders can be quickly designed with features that check for operator input errors and perform required calculations automatically. VersaForm is among the very few application systems that is designed with a completely non-technical user in mind. Yet it does not compromise the flexibility, power or utility needed for real-world business tasks.

#### **SOFTWARE SIMPLICITY**

With simplicity and processing power as a prime objective, Applied Software Technology employed the latest, most sophisticated programming and system analysis technologies

available. This is reflected in the choice of Pascal as a programming language. Pascal provides the technical ability to write very powerful programs, such as VersaForm, that appear to the user to be very simple. And because Pascal is one of the newer 'structured' languages, modifications and enhancements to the basic program can easily be developed and tested. This ensures that future enhancements can be easily implemented, and future hardware supported. VersaForm will be a product of enduring and growing value.

#### MAJOR FUNCTIONS

- \* COMPUTER VALIDATION of data you enter, to help catch typing and recording errors.
- \* FAST RETRIEVAL and modification of data you entered previously.
- \* AUTOMATIC CALCULATION of extensions, total, etc. on your form.
- \* DETAIL OR SUMMARY REPORTS from your business form files, with the items sorted in the order you designate. Reports may be ad hoc or prearranged.
- \* PRINTOUTS ON PREPRINTED PAPER FORMS- with the ability to rearrange the data to fit an already existing form.

#### FUNCTIONAL HIGHLIGHTS

- \* Pascal Implementation provides compatibility with new computers and peripherals, ease of interfacing, quality construction in a sophisticated operating environment.
- \* Extensive data entry checking:
  - mandatory entry
  - numbers
  - range
  - dates
  - list of legal values
  - format (phone #, SSN, zip, part#)
  - self-checking numbers
  - ...and more
- \* No data types- data entry is always freeform, but always handled correctly, whether numbers, dates, or just words. Upper and lower case are usable; words are recognized whether capitalized or not.
- \* Prints forms on either blank or pre-printed stock. Mailing labels are simply a particular type of form.
- \* Files never need reorganization. B-tree index structure allows access to any record within seconds.
- \* Designed for data integrity- file and index changes occur immediately and are organized to avoid loss of data due to power outage or hardware malfunction.
- \* Automatically formatted report, with sorting, totalling, and subtotalling.
- \* Supports 80 column video boards and external CRT terminals as well as the standard Apple 40-column display.
- \* Customizable for keyboards with cursor direction keys and user definable function keys. Any command may be function-key activated.
- \* Supports "hard" disks- up to 4 million characters of file space per file.
- \* Interface with other Pascal programs. Word processors may be used to produce form letters.
- \* Built-in calculator that operates directly on your forms.
- \* Calculation- any items on a form can be calculated from any other, in any order. Operations are +, -, \*, /, maximum, minimum, and column total. Specification is nonprocedural.
- \* Table Lookup- up to 99 codes can be used to look up data which is automatically placed on the form.

#### CAPACITIES AND SPECIFICATIONS

File capacity (hard disk); 4 MB  
File capacity (floppy disk); size of disk  
File capacity (forms); Maximum                      Average

Diskette	1,000	333
Rigid Disk	30,000	10,000

Concurrently open files; 1

Form Capacity

Number of items- 50 (column of 99 counts as 1) Apple III- 75

Total data bytes- 4000

Numbers of column lines- 50-99 (depending on width)

Table Lookup; 99 list entries per item

List Checks; 99 list entries per item

Range Checks; 99 ranges per item

Calculations; 6 arguments per item calculated

Data item capacity- to 78 characters.

Numeric Precision- to 13 integer digits, 8 decimal places

Declared Data Types- none

Dynamic Data Types- numeric, alphanumeric, data

Keys- unique primary key; composed of one or two data items

Reporting

\* Number of files: no limit

\* Total Report size: 135,000 characters

\* Line width: to 200 characters

\* Output records: 240 characters; may be folded to 3 lines on paper

\* Item selection: up to 9 conditions may be OR'ed, up to 3 tests (AND'ed) in each.

\* Softing: 3 nested levels of ascending and/or descending sort. 3 levels of control breaks with or without subtotals

\* Totals: up to 8 columns

\* Number of report specifications- no limit

\* Printers: maximum width 200 characters, any spacing Number of output formats- no limit

**PRICE:**

**TITLE: VISICALC III**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** VisiCalc III is a powerful new version of the award-winning VisiCalc software, designed especially for use with the Apple III computer system. It virtually eliminates calculator, paper, and pencil in developing plans and analyzing results. Any problem you might wish to tackle using rows and columns can be solved quickly - and accurately - with VisiCalc III. You can create your own models or use an existing one from the VisiCalc III library of "tool kits". General purpose business, real estate, and financial models are already available, with more planned for the future.

Managers can use VisiCalc III to plan budgets, create forecasts, and develop pricing strategies. Financial professionals can prepare statements, compute ratios, and modify projections. Scientists and engineers can study causes, effects, and tradeoffs - all in seconds, instead of hours or days.

One of the most innovative and versatile planning tools ever designed, VisiCalc III is a powerful productivity tool for every manager and professional.

VISICALC III...

-Increases personal productivity, because of its flexibility, ease of use, and high-speed computation...

-Can be put to work immediately, because it allows you to write and use complex "programs" without learning a programming language...

-Speeds data manipulation through an extensive, built-in library of financial, statistical, and scientific functions...

-Expands the effective workspace of your monitor screen, because the Apple III's four cursor control keys allow rapid display of any portion of a large spread sheet...



- Simplifies data checking and comparison through its "split-screen" capability, which allows you to display, move, and modify widely separated entries side by side...
- Eliminates trial-and-error columnar formatting of documents, because its display - with 80 upper and lower case characters per line - prints exactly as it appears on the screen...
- Increases your data handling capabilities, because the Apple III's large, 65K-byte user memory space allows you to construct and work with very large models...
- Enhances the appearance of your reports, because you can title rows and columns - and vary the numeric and graphics format - to produce the look you want.

To use VisiCalc III, simply insert the program diskette into the Apple III disk drive and "boot" the system. On your monitor screen you'll see an electronic worksheet - resembling a columnar pad - of up to 63 columns and 254 rows. At the juncture of any column and row, you can type in words, numbers, or formulas. Your monitor screen is a "window" which allows you to view a section of the entire VisiCalc III worksheet. The window can be moved, or "scrolled", in all four directions for viewing every section. Or you can split the screen into two "windows", so that you can compare pieces of data that are in different places on your worksheet. You can even synchronize "windows" so that they move together, always keeping particular lines or columns of data next to one another.

By using either the Apple III's arrow keys, or the "GO TO" capability of VisiCalc III, you can quickly move the cell cursor to any area of the worksheet. Visible at any given time are 20 rows of data; the number of columns you can see depends on the column width you've designated. Typically, you will see at least eight columns - the same number that would fit on an 8 1/2 inch sheet of paper.

Entering or changing values and words on the worksheet is quite straightforward. First, position the box cursor to the place where you want the data to appear (or where you wish to change data already entered). Then simply enter the new numbers or words.

Titles and column headings can be written anywhere on the worksheet. When placed either along the top or down the left-hand side, you can "lock" them into place. Once locked, the title or column heading will 'follow' and identify the data associated with it, even when you move to the furthest row or column position. And you can easily unlock titles whenever you want.

When you enter a formula, it will be displayed on the top row of the screen. If you change it at some point, the new values that result will be calculated and displayed instantly on the worksheet.

Formulas can be as simple or as complex as you like. For instance, VisiCalc III can add, subtract, multiply, or divide values located anywhere on the screen - even those values derived by other formulas. A built-in function library conveniently provides many financial, many financial, scientific, statistical, and mathematical functions - including net present value, average value and transcendental functions. The result of any calculation is displayed instantly on your screen.

In addition, a replication capability allows you to repeat a formula automatically many times, with different variables substituted. For example, the formula you use to compute January's profit can be replicated to compute profits by month from February through December as well. VisiCalc III's replication feature automatically substitutes the appropriate data elements for each month.

Because VisiCalc III performs complex calculations instantly,



you can play "What if...?" as often as you like to solve thousands of different problems. For example, imagine that you've created a business forecast model that takes your gross profit, cost, and net income into account. Sometime later, you begin to wonder what the impact would be if your vendors decided to raise finance charges by 2%. With a few keystrokes, you can update your forecast based on this new assumption, and VisiCalc III will perform the calculations and display the new results instantly for your review.

Another useful feature of VisiCalc III is its "Insert and Delete" editing capability. Using Insert and Delete you can add or delete entire rows or columns in your worksheet model. For instance, suppose you suddenly see that the forecast or plan you're working on is more complex than had been originally thought, and you wish to add more elements to your model. VisiCalc III's insert and Delete feature allows you to add them painlessly, without having to redesign the entire worksheet. Similarly, you can move entire rows or columns to rearrange pieces of data in your model. VisiCalc III automatically keeps all formulas updated, as you move pieces of your worksheet around.

VisiCalc III lets you quickly save entire worksheets as files on diskettes - including the data, formats, and location on the worksheet where the cursor was last positioned. VisiCalc III data can also be saved by itself, without the worksheet, to be graphed or plotted by other Apple III programs.

Any printer that works with the Apple III can be used to produce a hard copy of your VisiCalc III worksheet. You can print entire worksheets, or - by specifying column letters and row numbers - only selected parts of the data.

If your job frequently involves organizing and manipulating data to prepare budgets, schedules, forecasts, or tables of information, VisiCalc III can significantly increase your productivity and improve the overall quality of your planning.

To use VisiCalc III, you will need:

-The Apple III Information Analyst System (Option A,B or C);  
OR

-Any Apple III;

-Apple III Monitor;

-Silentype or letter-quality printer (optional).

**PRICE:**

#### **TITLE: VISISCHEDULE**

**PUBLISHERS NAME: VISICORP**

**DESCRIPTION:** This program is an interactive project-management package. A calendar representation of start and stop dates, slack time, holidays and deadlines for up to 300 different tasks can be displayed and automatically printed out. You can also display information such as critical path, project milestones and cost estimates with the program.

**PRICE: \$300.00**

#### **TITLE: WORD III**

**PUBLISHERS NAME: SYSTEM DECISIONS GROUP**

**DESCRIPTION:**

**FEATURES:**

- arrow keys to traverse document, scroll
- backups - memory file, diskette files
- boldface printing
- bootable WORD III system
- character inserts, deletes
- centering, line

- display of reference screen, current screen of document alternately
  - end session: save file, no update
  - editing, full screen
    - modify or replace any part of document
  - file locking
  - format features (reformat at any time)
    - margins, resettable for parts of document
    - tabs (visible tab scale)
    - page length
    - lines per page
    - page numbering (5 options)
    - justification: full, left margin only, none, parts of document only
  - indenting
  - line splitting (for bulk insertion of text)
  - printing: to various printers on same system
    - single or multiple files (documents)
    - automatic repeat
    - start at any page
    - keyboard interruption
    - single page feed options
    - two-column option
  - search: and replace
    - quick search
    - full search
  - text: add at end of document
    - insertion
    - from console
    - from other text file
    - block moves
    - copying
    - changing
  - underlining and word wraparound
  - runs with floppy or hard disk
  - runs with any Apple III memory size
  - reversal of bright and dark screens option
  - automatic display of remaining free blocks on diskette after each writing of memory file to disk
  - REPAIR program patches workfile made UNLOADABLE by attempt to save memory file on full disk
  - and more...
- PRICE:**

**TITLE: WORD JUGGLER**

**PUBLISHERS NAME: QUARK ENGINEERING**

**DESCRIPTION:**

WORD JUGGLER IS THE WORD PROCESSOR DESIGNED SPECIFICALLY FOR THE APPLE III. It is written in assembly language for optimum performance and uses Apple's Sophisticated Operating System to insure that it will take advantage of new hardware. The hard disk and universal parallel card are directly compatible with Word Juggler.

EASIEST TO USE. Special keyboard templates are provided to label most of the editing keys. Other keys have their functions described on a quick reference card that props up behind the keyboard (without covering up the display). There is virtually nothing to memorize. In the office environment, your savings in training time alone will more than pay for the product.

SOPHISTICATED EDITING COMMANDS. There are upwards of 20 editing commands. You can delete characters, words or paragraphs with the touch of a button. Search and replace functions allow you to change all (or selected) occurrences of one string to another.

Cut and paste operations are easily performed using the block move and block copy keys.

PRINT FORMATTING IS EASILY ACCOMPLISHED. Print formatting keys are labeled on the keyboard templates. With just a few keystrokes you can change margins, page length or any other formatting parameter. You can even print documents as wide as 254 columns. Page numbering is a snap. Page numbers can be placed anywhere in the top or bottom margin. They may be chapter relative if you so desire.

DOCUMENTS CAN BE CHAINED. In the case that you are building a document that exceeds the 799 line limit (1536 for 256K machines), you may break it up into smaller pieces and chain them all together for printing. This allows you to print documents of virtually infinite length.

VISICALC FILES CAN BE INCLUDED IN A DOCUMENT. Using the print to file option in Visicalc you can create a document that Word Juggler can use. You may then insert it into your document or chain it in when you print the document.

ON SCREEN DOCUMENT PREVIEW. A single keystroke allows you to display the the document in final form on the screen. Even documents wider than 80 columns can be viewed using the horizontal scrolling feature.

DOCUMENT PRINT OUT is also accomplished with a single keystroke. You can also print multiple copies or only specific pages.

FREE MAILING LIST FACILITY. A simple mailing list can be created using only Word Juggler. There is no need to buy a special program. Word Juggler can handle small mailing lists (up to about 150 names). It can easily print mailing labels and form letters. You can even print letters just to selected names on the list. If you need greater capacity, you can add the Mail List Manager Interface program which allows you to access files created by Apple's Mail List Manager.

SIMPLE TYPING TASKS can be easily performed. You can turn your computer into a normal electric typewriter with the touch of a button. This makes filling out forms easy. There's even a special key that allows you to extract the address out of a letter and print it on an envelope.

VARIABLES GIVE WORD JUGGLER A FILL-IN-THE-BLANK CAPABILITY. You may also produce "form letters" without using a mailing list. Special "blanks" called variables may be inserted in a document. They are filled in by the operator when the document is printed, allowing you to produce a customized document.

SOPHISTICATED PRINTER CONTROL. Word Juggler supports more features on more printers than any other Apple III processor. Bold printing, underlining, superscripting and subscripting are supported on Qume, Diablo, Xerox and NEC printers (incremental spacing is also supported). Direct support is also provided for the MX-80, MX-100, Silentype, Anadex 9000/9500 series, IDS-560 and most other popular printers.

Word Juggler comes on a single diskette which contains the word processor program and utilities. A backup diskette is also provided.

PRICE: \$295.00

**TITLE: WORD PAINTER**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Apple's Word Painter software turns your Apple III computer into a powerful, personal word processing system. You can quickly compose, revise, and print all kinds of documents, from memos and brochures to form letters and entire, book-length manuscripts.

As you enter text, Word Painter shows you - on the screen - what your document will look like when it's printed. Centered

lines, ragged left and right margins, tabs and indentations - they're all displayed, so that you can check document format at a glance. And Word Painter gives you complete control over printing, too, for letter-perfect documents every time.

Paint your way out of paperwork corners, with Apple's powerful, easy-to-use Word Painter software for the Apple III computer. It's ushering in a whole new age of fast, clear business communications.

#### WORD PAINTER...

- Encourages fresh, creative approaches to communications by making it easy to experiment with different words, phrases, and writing styles...
- Increases productivity by eliminating repetitive, inefficient routines such as retyping, replacing words, and centering lines...
- Gives you an accurate picture of what your documents will look like when printed, because centered lines, ragged left and right margins, and tabs and indentations are all displayed as they're entered...
- Saves time manipulating text with its powerful formatting, editing, and printing commands...
- Simplifies document design and minimizes training with helpful "forms entry" displays...
- Reduces the possibility of human error by signaling when you enter invalid commands.

Because Word Painter works with a number of special keys on the Apple III keyboard, text editing is so logical and involves so few keystrokes that it almost becomes a natural reflex - like shifting from lower to upper case on a typewriter.

The four, dedicated cursor control keys move the cursor backward or forward (character by character), and up or down (line by line). Holding down any of the four keys auto-repeats its cursor movement. When the cursor moves past the top or bottom lines displayed on the screen, the text automatically 'scrolls' - advances or backs up, as required - so that you can conveniently scan whole documents from beginning to end. Four grammatical keys on the Apple III keyboard lets you position the cursor even more quickly and directly throughout the text - by word, sentence, paragraph, or page.

Some of Word Painter's most powerful word processing functions are provided through the use of two other keys. REPLACE and SELECT, on the Apple III keyboard. Using REPLACE (the key with the solid white Apple logo), you can delete text - by word - instantly. Or you can access the REPLACE mode - for one-over-one character replacement - to correct transpositions or minor misspellings.

The SELECT key is even more versatile. Using it, you can create a new document, revise a copy (without changing the original), revise the original document, protect a selected document from modification, delete a document from the diskette, print a document (either certain pages or the entire manuscript), or instantly "turn to" any page of the document you're working on.

Word Painter also features a number of special, Forms Entry displays accessed through the SET UP key on the Apple III keyboard. These word processing aids make it easy for you to define and change any document's format, from the number of spaces between lines to the space reserved for left and right margins. You format your document by "filling out the form" displayed on the screen.

Whenever you're working on the text of a document, a four-line Status Display is present at the top of the screen, reminding you of various information, including left/right margin settings and page number. This is a handy reference which reminds you of the



document format you've specified.

Word Painter also provides a number of powerful commands that let you quickly format, move, copy, and protect text. There's a separate key on the Apple III keyboard for each command.

Word Painter also features a powerful "search and replace" capability. Suppose that you've misspelled or misused a word throughout a document. Using the SEARCH and REPLACE keys on the Apple III keyboard, you can correct the misspelling or replace the word wherever it occurs - one instance at a time, or all at once and automatically.

Once a document is ready to be printed, Word Painter gives you a fine degree of control over the way it will finally look on paper. You can adjust all settings - margins, line spacing, etc. - quickly and easily.

And print functions such as underlining, bold printing, subscripting, or superscripting can all be specified wherever you like. Word Painter also lets you print selected pages of a report (readers see only what you want them to see), or as many as 999 copies of an entire document.

Whether you're a busy executive who needs closer control over written communications, or a beleaguered office administrator fighting the paperwork explosion, Apple's Word Painter software has been designed for you. It's the only professional word processing software with a personal touch.

**PRICE:**

**TITLE: WORD WEAVER II**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** A powerful, comprehensive, yet easy to use word processor for the Apple III. The sophisticated edit commands based on the popular Program Line Editor, include global find and replace. Line up to 253 characters are allowed, as well as embedded printer controls. (Send for new detailed flyer)

**PRICE: \$149.95**

## BUSINESS

Small businesses and self employed professionals can claim credit for creating the microcomputer revolution. Until they began to seek ways to use the micro computer to solve business problems and to keep business records the microcomputer was little more than an obscure hobby for a few technicians.

At first, the programs that were available for the business owner were limited in number and often of poor quality. Today, there is a microcomputer program for almost any common business need from preparing payroll checks and reports to programs that produce forecasts of business budgets in color graphic patterns. The quality of business programs for microcomputers are available at a cost of less than one percent (1%) of the cost of developing the programs. Comparable programs for mini computers might cost \$10,000 and similar programs on main frame computers might cost \$50,000. The microcomputer owner can buy the program for \$150 to \$500.

Whether you need programs for recordkeeping, profit control, budgeting and forecasting, tax preparation or planning, professional timekeeping, investment analysis or word processing, here an abundance of ready to use solutions for your business/professional problems.

Sincerely,

Vernon K. Jacobs CPA

President, Syntax Corporation



## BUSINESS

### ACCOUNTS PAYABLE

ACCOUNTS PAYABLE . . . . .	BUS-1
ACCOUNTS PAYABLE . . . . .	BUS-1
ACCOUNTS PAYABLE . . . . .	BUS-1
ACCOUNTS PAYABLE . . . . .	BUS-1
ACCOUNTS PAYABLE . . . . .	BUS-1
MICROPAY . . . . .	BUS-2
SYSTEMS II EX - ACCOUNTS PAYABLE . . . . .	BUS-2
THE COMPUTER PROGRAMMED ACCOUNTANT CPA 3 ACCOUNTS PAYABLE . . . . .	BUS-3

### ACCOUNTS RECEIVABLE

ACCOUNTS RECEIVABLE . . . . .	BUS-4
ACCOUNTS RECEIVABLE . . . . .	BUS-4
ACCOUNTS RECEIVABLE . . . . .	BUS-4
ACCOUNTS RECEIVABLE . . . . .	BUS-4
ACCOUNTS RECEIVABLE . . . . .	BUS-5
ACCOUNTS RECEIVABLE . . . . .	BUS-5
ACCOUNTS RECEIVABLE . . . . .	BUS-5
ACCOUNTS RECEIVABLE SYSTEM . . . . .	BUS-6
INTEREST PRINT . . . . .	BUS-6
MICROREC . . . . .	BUS-6
RECEIVER . . . . .	BUS-7
SYSTEMS II EX - ACCOUNTS RECEIVABLE . . . . .	BUS-7
THE COMPUTERPROGRAMMED ACCOUNTANTCPA 2 ACCOUNTS REC. . . . .	BUS-7

### FINANCIAL MODELING/PLANNING

APM . . . . .	BUS-9
APPLE II SENIOR ANALYST . . . . .	BUS-9
APR LOAN ANALYSIS . . . . .	BUS-10
BASIC INDIVIDUAL RETIREMENT ACCOUNT . . . . .	BUS-10
BUSINESS PLANNER . . . . .	BUS-10
BUSINESS VALUATION ANALYSIS . . . . .	BUS-10
CAPITAL INVESTMENT ANALYSIS . . . . .	BUS-11
CASH-FLOW ANALYSIS . . . . .	BUS-11
COMMERCIAL ACCOUNT PROFITABILITY ANALYSIS . . . . .	BUS-11
CONSTRUCTION COST/PROFIT ANALYSIS . . . . .	BUS-11
CORPORATION FEASIBILITY STUDY . . . . .	BUS-11
CREATIVE FINANCING . . . . .	BUS-12
DEPRECIATION . . . . .	RUS-12
DESKTOP/PLAN II . . . . .	BUS-13
DISCLOSURE STATEMENT . . . . .	BUS-13
ECONOMIC ANALYSIS GROUP . . . . .	BUS-14
ESTATE VALUATION ANALYSIS . . . . .	BUS-14
F.A.S.T. . . . .	BUS-14
FAMILY SECURITY NEEDS ANALYSIS (FSNA) . . . . .	BUS-15
FINANCIAL . . . . .	BUS-15
FINANCIAL GOALS ANALYSIS . . . . .	BUS-15
FINANCIAL MANAGEMENT SYSTEM III WITH CHECKWRITER III . . . . .	BUS-16
FIXED ASSETS . . . . .	BUS-17
KEOGH . . . . .	BUS-17
KISS FINANCIAL PROGRAMS . . . . .	BUS-17
LEDGER STATEMENT - WHOLE LIFE . . . . .	BUS-18
LOAN AMORTIZATION . . . . .	BUS-18
LOAN DEPRECIATION . . . . .	BUS-18
LOAN REDUCTION ANALYSIS . . . . .	BUS-18
MICRO-DYNAMO . . . . .	BUS-18
MINIMUM DEPOSIT PROGRAM . . . . .	BUS-19
MOD WHOLE LIFE (DEPOSIT TERM) LEDGER . . . . .	BUS-19
MORTGAGE ACCELERATION PROGRAM (MAP) . . . . .	BUS-19

MULTI-YEAR PLANNING MODEL . . . . .	BUS-20
OPTIONS 80 . . . . .	BUS-20
ORDER TRACKING SYSTEM . . . . .	BUS-20
PERSONAL FINANCE MASTER . . . . .	BUS-21
PLAN80 . . . . .	BUS-21
PROJECT CONTROL AND REPORTING (CORE) . . . . .	BUS-22
PROJECT PLANNING AND ANALYSIS (PAL) . . . . .	BUS-23
QUIKDIRT - CAPITAL BUDGETING . . . . .	BUS-24
QUIKDIRT - CASH REPLENISHMENT . . . . .	BUS-24
RESTAURANT PROFIT ANALYSIS . . . . .	BUS-24
RETIRED LIVES RESERVE . . . . .	BUS-25
SECTION 79 . . . . .	BUS-25
SERVICE CHARGE ANALYSIS AND PRICING MODEL . . . . .	BUS-25
SPLIT DOLLAR . . . . .	BUS-25
STATEMENT OF NET WORTH . . . . .	BUS-26
TAX DEFERRED ANNUITY VS. NON TAX DEFERRED SAVINGS . . . . .	BUS-26
TERM INSURANCE ILLUSTRATION . . . . .	BUS-26
TERM/WHOLE LIFE COMPARISON . . . . .	BUS-26
THE ACCOUNTANT . . . . .	BUS-27
THE IRA ASSESSOR . . . . .	BUS-27
THE RETIREMENT PLANNER . . . . .	BUS-28
VERSACALC 16 . . . . .	BUS-28
VISICALC . . . . .	BUS-29
VISISCHEDULE . . . . .	BUS-30
VISITREND VISIPILOT . . . . .	BUS-31

#### GENERAL ACCOUNTING

ACCOUNT KEEPER . . . . .	BUS-33
ACCOUNTANT/COMPLETE ACCOUNTING SYSTEM . . . . .	BUS-33
ACCOUNTS RECEIVABLES/PAYABLE . . . . .	BUS-33
APPLE CHAMP . . . . .	BUS-34
APPLE TRAC . . . . .	BUS-34
ASSET MANAGER . . . . .	BUS-34
BUSICOMP . . . . .	BUS-34
BUSINESS ACCOUNTING PACKAGE . . . . .	BUS-35
BUSINESS SOFTWARE SERIES . . . . .	BUS-35
CLIENT RECORDS/BILL PREPARATION . . . . .	BUS-36
CONJOB . . . . .	BUS-36
CONSTRUCTION BOOKKEEPER . . . . .	BUS-37
COST ACCOUNTANT . . . . .	BUS-37
FINANCIAL PARTNER . . . . .	BUS-37
GENERAL ACCOUNTING SYSTEM . . . . .	BUS-38
INCOMPLETE RECORDS ACCOUNTING SYSTEM . . . . .	BUS-39
PERFORMANCE MANAGER . . . . .	BUS-39
PURCHASE LEDGER SYSTEM . . . . .	BUS-40
SALES LEDGER SYSTEM . . . . .	BUS-40
SMALL BUSINESS SOFTWARE . . . . .	BUS-40
SYSTEMS II EX . . . . .	BUS-40
THE ANALYZER . . . . .	BUS-41
THE B.O.S.S. . . . .	BUS-41
THE CONTROLLER . . . . .	BUS-42
THE CONTROLLER (GBSI) . . . . .	BUS-42
THE UNIVERSAL COMPUTING MACHINE . . . . .	BUS-43
THINKER . . . . .	BUS-44

#### GENERAL LEDGER

ABACUS . . . . .	BUS-45
ACCOUNTING PLUS II . . . . .	BUS-45
ACCTS. PAYABLE/RECEIVABLE . . . . .	BUS-47
B.I.S. GENERAL LEDGER ON LINE . . . . .	BUS-47
EZ-LEDGER . . . . .	BUS-47
GENERAL LEDGER . . . . .	BUS-48



GENERAL LEDGER . . . . .	BUS-48
GENERAL LEDGER . . . . .	BUS-49
GENERAL LEDGER . . . . .	BUS-49
GENERAL LEDGER . . . . .	BUS-49
GENERAL LEDGER . . . . .	BUS-50
GENERAL LEDGER . . . . .	BUS-50
GENERAL LEDGER MODULE . . . . .	BUS-50
GENERAL LEDGER PACKAGE . . . . .	BUS-51
GENERAL LEDGER WITH PAYABLES . . . . .	BUS-52
HAYES CONDENSED GENERAL LEDGER PROGRAM . . . . .	BUS-52
LEDGERPLUS . . . . .	BUS-53
MAXILEDGER . . . . .	BUS-54
MICRO-GENERAL LEDGER . . . . .	BUS-55
MICROACCOUNTANT . . . . .	BUS-55
MICROLEDGER . . . . .	BUS-56
NO-NONSENSE BOOKS . . . . .	BUS-56
SUPERLEDGER . . . . .	BUS-57
SYSTEMS II EX - GENERAL LEDGER . . . . .	BUS-57
THE COMPUTER PROGRAMMED ACCOUNTANT CPA-1 GENERAL LEDGER . . . . .	BUS-57

## INVENTORY CONTROL

INVENTORY CONTROL . . . . .	BUS-58
INVENTORY MANAGEMENT SYSTEM FOR STOCK CONTROL . . . . .	BUS-58
INVENTORY PROGRAM . . . . .	BUS-58
MICRO-INVENTORY . . . . .	BUS-59
MICROBOMB . . . . .	BUS-59
MICROINV . . . . .	BUS-59
QUIKDIRT - IN-PROCESS INVENTORY . . . . .	BUS-60
QUIKDIRT - WAREHOUSE LOCATION . . . . .	BUS-60
STOCKROOM . . . . .	BUS-61
SUPERFOX . . . . .	BUS-61
SYSTEMS II EX - INVENTORY . . . . .	BUS-61
THE CASHIER . . . . .	BUS-62
THE INVENTORY CONTROL SYSTEM . . . . .	BUS-62
THE INVENTORY MANAGER . . . . .	BUS-63
THE ORDER SCHEDULER . . . . .	BUS-63
THE STORE MANAGER . . . . .	BUS-63

## JOB CONTROL

JOB CONTROL SYSTEM . . . . .	BUS-64
JOB COST SYSTEM . . . . .	BUS-64
JOB COSTING SYSTEM . . . . .	BUS-64
JOB SCHEDULING . . . . .	BUS-65
SYSTEMS II EX - SYSTEMS II JOB COSTING MODULE . . . . .	BUS-65

## MISCELLANEOUS

ADVERTISING MESSAGE PROGRAM FOR APPLE . . . . .	BUS-66
AMWAY DISTRIBUTORS PROGRAM . . . . .	BUS-66
APPLE BOWLING SECRETARY . . . . .	BUS-66
APPLELOG . . . . .	BUS-66
APPLESACK 1 - 40 PRACTICAL PROGRAMS . . . . .	BUS-66
APPOINTMENTS . . . . .	BUS-67
BOWLING DATA SYSTEM . . . . .	BUS-67
BOWLING LEAGUE RECORD SYSTEM . . . . .	BUS-68
BOWLING TOURNAMENT RECORDS . . . . .	BUS-68
BUSINESS PACKAGE I . . . . .	BUS-69
BUSINESS PACKAGE III . . . . .	BUS-69
BUSINESS VALUATION . . . . .	BUS-69
CAPITAL NEED ANALYSIS DISABILITY INCOME SUPPLEMENT . . . . .	BUS-70
CAPITAL NEED ANALYSIS HYPOTHETICAL PROBATE SUPPLEMENT . . . . .	BUS-70
CAPITAL NEED ANALYSIS . . . . .	BUS-70

CASHMASTER . . . . .	BUS-70
CASHMASTER . . . . .	BUS-70
CHECKWRITER . . . . .	BUS-70
CHECKWRITER II . . . . .	BUS-71
CLIENT BILLING SYSTEM (C.B.S.) . . . . .	BUS-71
COLOR CALENDAR . . . . .	BUS-72
COMPU-LAW (THE LAW OFFICE MANAGEMENT SYSTEM) . . . . .	BUS-72
CONSTRUCTION MATERIAL LIST GENERATOR . . . . .	BUS-73
DAYMASTER . . . . .	BUS-74
DECISION MASTER . . . . .	BUS-74
DEPRECIATION/CRITICAL PATH/PROFIT ANALYSIS . . . . .	BUS-75
DISPATCH . . . . .	BUS-75
EASY FORM . . . . .	BUS-75
ELECTRONIC PRICE SHEET . . . . .	BUS-76
EXPLORE AND CHART AUDIENCE . . . . .	BUS-77
FINANCE I . . . . .	BUS-77
FINANCIAL MANAGEMENT SYSTEM II . . . . .	BUS-77
INSURANCE BROKING SYSTEM . . . . .	BUS-78
LEGAL CLERK . . . . .	BUS-78
LIFECALC . . . . .	BUS-78
MANNA . . . . .	BUS-80
MANUFACTURING COST ESTIMATE . . . . .	BUS-80
MONEY MANAGEMENT ASSESSMENT SERIES . . . . .	BUS-80
MULTI-MESSAGE AD . . . . .	BUS-80
OFFICE MANAGER . . . . .	BUS-81
OIL AND GAS COMPANION . . . . .	BUS-81
ORDER ENTRY . . . . .	BUS-82
PDP-PROGRAM DIRECTOR'S PLANNER PACKAGE . . . . .	BUS-82
PHONE DIRECTORY . . . . .	BUS-82
PRACTICAL BASIC PROGRAMS . . . . .	BUS-82
PROFESSIONAL TIME & BILLING . . . . .	BUS-83
PROFESSIONAL TIMEKEEPING SYSTEM . . . . .	BUS-83
PROJECT BOSS . . . . .	BUS-84
PROJECT MANAGEMENT GROUP . . . . .	BUS-84
PROJECT PLANNING . . . . .	BUS-84
PROJECT SCHEDULE ANALYSIS I . . . . .	BUS-85
QUIKDIRT - PRODUCTION SCHEDULING . . . . .	BUS-85
QUIKDIRT - TRANSPORTATION PLANNING . . . . .	BUS-85
RECALL - (THE ARBITRON ANALYSIS PACKAGE) . . . . .	BUS-86
RETAIL MANAGER . . . . .	BUS-86
ROUTEPLANNER . . . . .	BUS-86
SHOULD YOU INCORPORATE? . . . . .	BUS-87
SOME COMMON BASIC PROGRAMS . . . . .	BUS-87
THE AGENCY DATA MANAGEMENT SYSTEM . . . . .	BUS-87
THE BUDGETEER . . . . .	BUS-87
THE DEACON-CHURCH MEMBERSHIP SYSTEM . . . . .	BUS-88
THE ESTIMATOR . . . . .	BUS-88
THE INVOICE FACTORY . . . . .	BUS-88
THE LIFE INSURANCE CLIENT MANAGEMENT SYSTEM . . . . .	BUS-88
THE PRICE QUOTER . . . . .	BUS-90
THE PRINTER'S ESTIMATOR . . . . .	BUS-90
THE STEWARD - CHURCH CONTRIBUTION SYSTEM . . . . .	BUS-91
THE TRUSTEE - CHURCH FINANCE SYSTEM . . . . .	BUS-91
THE ULTRA PLOT/DIF DATAGRAPH . . . . .	BUS-92
THE UNDERWRITER . . . . .	BUS-93
TIME & MONEY METER . . . . .	BUS-93
TIME CLOCK II . . . . .	BUS-93
UNIDEP . . . . .	BUS-93
UNIVERSAL BUSINESS MACHINE . . . . .	BUS-93
V.I.P. II . . . . .	BUS-94
VISI-CAIDS . . . . .	BUS-94
VISILOT . . . . .	BUS-94
VTC SYSTEM PACKAGE . . . . .	BUS-95

## PAYROLL

ACCUREC TIME RECORDER/WAGE SUMMARY PROGRAM . . . . .	BUS-96
ADVANCED PAYROLL PACKAGE . . . . .	BUS-96
MICROPEERS . . . . .	BUS-97
PAYMASTER . . . . .	BUS-98
PAYMASTER . . . . .	BUS-98
PAYROLL . . . . .	BUS-98
PAYROLL . . . . .	BUS-99
PAYROLL . . . . .	BUS-99
PAYROLL . . . . .	BUS-100
PAYROLL FOR THE APPLE II PLUS . . . . .	BUS-100
PAYROLL MODULE . . . . .	BUS-100
PAYROLL PACKAGE . . . . .	BUS-100
PAYROLL SYSTEM . . . . .	BUS-101
PAYROLL/COST DISTRIBUTION SYSTEM . . . . .	BUS-101
PAYROLL/PERSONNEL . . . . .	BUS-101
PAYSYSTEM ACCOUNTANT . . . . .	BUS-102
SYSTEMS II EX - PAYROLL . . . . .	BUS-102
THE COMPUTER PROGRAMMED ACCOUNTANT CPA 4 PAYROLL . . . . .	BUS-103
TPS CANADIAN PAYROLL SYSTEM . . . . .	BUS-103

## REAL ESTATE

APARTMENT MANAGER . . . . .	BUS-104
APARTMENT MANAGER PROGRAM . . . . .	BUS-104
FINANCIAL PACKAGE . . . . .	BUS-104
HOME PURCHASE ANALYSIS . . . . .	BUS-105
INCOME PROPERTY ANALYSIS . . . . .	BUS-105
PROPERTY LISTING AND COMPARABLES . . . . .	BUS-106
PROPERTY MANAGEMENT . . . . .	BUS-106
PROPERTY MANAGEMENT SYSTEM . . . . .	BUS-107
PROPERTY SALES ANALYSIS . . . . .	BUS-107
REAL ESTATE ANALYSIS MODULES . . . . .	BUS-108
REAL ESTATE ANALYZER . . . . .	BUS-108
REAL ESTATE TEMPLATES . . . . .	BUS-108
REAL-SOFT . . . . .	BUS-109
RENT VS. BUY . . . . .	BUS-109
RENTAL MANAGER . . . . .	BUS-109
TAX DEFERRED EXCHANGE MODEL . . . . .	BUS-110
THE LANDLORD . . . . .	BUS-110
THE RENTAL MANAGER . . . . .	BUS-111

## STOCK MARKET

ANAL . . . . .	BUS-112
ANNUAL REPORT ANALYZER . . . . .	BUS-112
BONDS . . . . .	BUS-112
COMMODITIES TRANSACTIONS . . . . .	BUS-112
COMPUTERIZED STOCK MARKET ANALYSIS . . . . .	BUS-112
CYBER - TECH STOCK VALUATION PROGRAM . . . . .	BUS-114
DOW JONES SERIES PORTFOLIO EVALUATOR . . . . .	BUS-114
INTELLIGENT INVESTOR SERIES 1 . . . . .	BUS-115
INVESTMENT DATA SYSTEM . . . . .	BUS-116
MARKET ADVISOR . . . . .	BUS-116
MARKET CHARTER . . . . .	BUS-116
MARKET TRACKER . . . . .	BUS-117
MONEY BEE I . . . . .	BUS-117
MONEYBEE IX . . . . .	BUS-117
N2 MARKET ANALYZER (TM) . . . . .	BUS-117
PORTFOLIO EVALUATOR . . . . .	BUS-118
PORTFOLIO MASTER 3.1 . . . . .	BUS-118
STOCK CONTROL SYSTEM . . . . .	BUS-118
STOCK FORECASTING SYSTEM . . . . .	BUS-119

STOCK OPTION VALUATION . . . . .	BUS-119
STOCK OPTIONS . . . . .	BUS-119
STOCK PORTFOLIO . . . . .	BUS-120
STOCK PORTFOLIO SYSTEM . . . . .	BUS-120
STOCK TRACKER (VER. 3.5) . . . . .	BUS-120
STOCKFILE . . . . .	BUS-121
STOCKFILE (MULTI-USER) . . . . .	BUS-122
STOCKMAKER . . . . .	BUS-122
STOCKSELLER . . . . .	BUS-122
TECHNI-TRAC . . . . .	BUS-123
THE COMPUTING INVESTOR . . . . .	BUS-123
THE SMART ANALYSIS AND GRAPHICS PACKAGE . . . . .	BUS-124
TRADER . . . . .	BUS-125

## TAXES

ESTATE TAX PLAN . . . . .	BUS-126
HAYES FEDERAL TAX VISICALC TAX TEMPLATES . . . . .	BUS-127
INDIVIDUAL TAX PLAN . . . . .	BUS-127
MICRO TAX/SERIES . . . . .	BUS-128
PERSONAL TAX PLAN . . . . .	BUS-129
SHORTAX . . . . .	BUS-130
TAX ADVISOR . . . . .	BUS-131
TAX BEATER . . . . .	BUS-131
TAX PLANNER . . . . .	BUS-132
TAX PREPARATION . . . . .	BUS-133
TAX PREPARER . . . . .	BUS-134
TAX-MANAGER . . . . .	BUS-134



## ACCOUNTS PAYABLE

### **TITLE: ACCOUNTS PAYABLE**

**PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**

**DESCRIPTION:** Maintains data on up to 300 invoices, 60 charts of account, and 120 vendors at any one time. Provides checkwriting on pre-defined forms, complete audit trail, a variety of reports, and more.

**PRICE: \$275.00**

### **TITLE: ACCOUNTS PAYABLE**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** PAY 1- initializes A/P and adds records to Transaction file

PAY 2- Changes or deletes Transaction and Master records.

PAY 3- Reports outstanding A/P broken down into four categories- under 30 days, 31-60 days, 61-90 days, over 90 days.

PAY 4- Reports all outstanding A/P for a single customer or all customers, followed by Cash requirements.

PAY 5- Reports all outstanding A/P for a single date or a range of dates followed by Cash requirements.

PAY 6- Lists both the Transaction and the Master files.

PAY 7- Prints checks and accumulates and journalizes A/P (creates entries into the MICROLEDGERS JOURNAL file).

**PRICE:**

### **TITLE: ACCOUNTS PAYABLE**

**PUBLISHERS NAME: GOLWAY COMPUTER ENTERPRISES**

**DESCRIPTION:** Keeps a monthly ledger of your 125 accounts (or less), generates a report of outstanding bills (up to 15), and automatically sorts accounts by name. Update accounts with ease.

**PRICE: \$49.95**

### **TITLE: ACCOUNTS PAYABLE**

**PUBLISHERS NAME: WILSON JONES**

**DESCRIPTION:** Features:

- \* Complete analysis of aged vendor invoices, future cash requirements over three, variable length time periods, and discounts that may be taken.
- \* After selecting invoices for payment, preliminary check register prints out cash being disbursed. If disbursement creates an unfavorable cash flow invoices may be reselected.
- \* Manually written check, payments to non-vendors, adjustments and reversals are permitted.
- \* Payables and cash disbursements may be posted automatically to the appropriate General Ledger account.

**Reports Generated:**

Accounts Payable- Purchase Journal; Accounts Payable- Aging Schedule; Cash Requirements Schedule; Preliminary Check Register; Monthly Check Register; Vendor Checks; Accounts Payable Adjustment Journal; Payables Distribution Report; Payment Distribution Report; and Open Accounts Payable Report.

**PRICE:**

### **TITLE: ACCOUNTS PAYABLE**

**PUBLISHERS NAME: SENTIENT SOFTWARE**

**DESCRIPTION:**

**Features:**

- All transactions are posted to the General Ledger automatically.

- Tracks invoices on an open-item basis.
- Purchases Journal entries may be distributed to any General Ledger account. Each entry may be distributed to as many as 21 General Ledger accounts.
- Prints checks, and records handwritten checks.
- Allows up to 250 vendors.
- Temporary Vendor designation permits the user to easily update vendor files.
- Allows for full or partial payment of any invoice.
- Tracks discount date as well as due date to allow effective cash-flow management.

**Reports:**

Vendor Master File  
 Purchases Journal  
 Disbursements Journal  
 Accounts Payable Ledger  
 Check Register  
 Cash Requirements &  
 Open Invoice Reports

**PRICE:**

**TITLE: MICROPAY**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** Micropay consists of a series of computer programs that carry out the Accounts Payable functions for a small business. MICROPAY is designed to provide an essentially simplified sequence of operations that can be easily executed on a microcomputer by a person who has only the basic familiarity with such a system.

The first program lets you initialize your A/P transaction file and master file.

Then you may start entering A/P transactions.

Data includes vendor name, invoice number, description, quantity received, purchase order number, quantity ordered, ledger account number to be debited, ledger account number to be credited, street address and city-state-zip of vendor.

Later programs provide the means to accumulate transactions into your master file, which becomes your A/P history file. You may select to pay accounts for a single date, or for a range of dates. The program will count the appropriate records and tell you the number of continuous check forms required. It will then print your checks, ready to be mailed to the vendors.

The programs will also keep the master file updated and transmit the A/P information to the JOURNAL file. From there, MICROLEDGER will pick them up and integrate them with your other transactions.

Service routines make it easy to list both the transactions file and the master file. In case you find an error, or some data has been changed since you entered it, update routines carry out the changes quickly.

Reporting routines include facilities to output the following reports:

Cash requirements (single date/range of dates)

A/P single vendor/all vendors

A/P single date/range of dates

The user manual explains options in detail; contains sample data and sample runs; shows the exact format of check form and stub form to be printed with the company name and bank numbers to be able to use printing program.

**PRICE: \$140.00**

**PUBLISHERS NAME: WESTWARE SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: Two disk drive, 132 column printer**

**DESCRIPTION:** The ACCOUNTS PAYABLE module allows the invoice number to be up to six characters long. One Payable invoice may be divided amongst 10 different accounts. Alternate account numbers can be assigned for each payable, or one invoice can be distributed to ten different account numbers. Within this module, you have the capabilities for payments such as rent, lease, or cycle. Also invoices can be put on hold so no payment is made until you release it.

Specifications are as follows:

	5 1/4"
VENDOR FILE	400
OPEN INVOICE	
ACCOUNTS PAYABLE	400
PRICE: \$425.00 for 5 1/4" Floppy	
\$475.00 for Corvus	

**TITLE: THE COMPUTER PROGRAMMED ACCOUNTANT CPA 3 ACCOUNTS PAYABLE**

**PUBLISHERS NAME: CONTINENTAL SOFTWARE**

**DESCRIPTION:** Prints checks to vendors and non-vendors on available pre-printed checks or plain paper. Each check stub shows invoice(s) paid, discounts taken, net paid, prints Purchases and Cash Disbursement Journals. Customized journals. Allows simulation of manual special journal entries. Prints Aging Report to 150 days, vendor list and labels even a Cash Requirements Report. Post to General Ledger.

**PRICE: \$15.00; manual**  
**\$250.00**

## ACCOUNTS RECEIVABLE

### **TITLE: ACCOUNTS RECEIVABLE**

#### **PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** A flexible system with these features:

- \* Up to 500 accounts and up to 500 invoices per diskette.
- \* Prints invoices and customer statements & address labels.
- \* Interfaces to General Ledger.
- \* Interactive screen-based invoice work sheet.
- \* Produces the reports:
  - Aged Receivables
  - Sales Analysis
  - Customer Listings
  - Invoice Search

**PRICE: \$149.95**

### **TITLE: ACCOUNTS RECEIVABLE**

#### **PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**

**DESCRIPTION:** Issues statements with current, 30, 60, and 90 day balances for all customers or single customers. Prints sales and cash receipts journal, debits, and credits, aging reports and posts to General ledger, and more.

**PRICE: \$325.00**

### **TITLE: ACCOUNTS RECEIVABLE**

#### **PUBLISHERS NAME: SMALL BUSINESS COMPUTER SYSTEMS**

**DESCRIPTION:** Allows you to assign your own alphanumeric customer code up to six characters. Date of the last activity, as well as amounts billed this year and last year are maintained. This Accounts Receivable system maintains six digit invoicing numbers, six digit job numbers, invoice amount, shipping charges, sales tax (automatically calculated), total payments as well as progress billing information. You may enter an invoice at any time; before it's ready for billing, after you have billed it, and even after it's paid. Also prints reports which list the invoices you have not billed yet, open items, paid items, and an aging analysis of open items.

With our General Ledger package you can format your own balance sheet and income statement. Department financial statements may be formatted differently. You have complete freedom to place titles and headings where you want them skip lines or pages between accounts and generate subtotals and totals lines or pages between accounts and generate subtotals and totals throughout the reports- up to ten levels if you need them. Accounts Receivable is designed to provide you with complete up-to-date information. The program will print customer statements as well as post invoice amounts to any of the accounts maintained by our General Ledger package. These packages will support any printer/interface combination. General Ledger requires one hundred ten columns, Accounts Receivable requires one hundred thirty columns.

**PRICE: \$180.00; individually**  
**\$330.00; together**

### **TITLE: ACCOUNTS RECEIVABLE**

#### **PUBLISHERS NAME: GOLWAY COMPUTER ENTERPRISES**

**DESCRIPTION:** Up to 125 accounts can be stored in this program, with 15 outstanding invoices per account. Also for each of the accounts, a monthly ledger is kept and a ledger report is generated each month. It also generates a report of past due accounts, and you can update (add or delete) accounts with the



program automatically sorting by account name.

**PRICE: \$49.95**

**TITLE: ACCOUNTS RECEIVABLE**

**PUBLISHERS NAME: SENTIENT SOFTWARE**

**HARDWARE REQUIREMENTS: 2 Disk Drives, 80-column printer**

**DESCRIPTION:**

**Features:**

- All transactions are posted to the General Ledger automatically.
- Tracks receivables on a balance-forward basis.
- Sales Journal entries may be distributed to any General Ledger account. Each entry may be distributed to as many as 21 General Ledger accounts.
- Automatic aging of receivables.
- Handles up to 600 active customers.
- Temporary Customer designation permits the user to easily update customer files.
- Applies payments or credits to any aging period.
- Issues statements listing all monthly activity on preprinted forms.
- Customized computation of finance charges for each account.

**Reports:**

Customer Master File

Sales Journal

Payments Journal

Detailed Aged Trial Balance

Statements

Finance Charge Report

**PRICE:**

**TITLE: ACCOUNTS RECEIVABLE**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** REC 1- Initializes A/R, adds A/R records and prints.

REC 2- Enters receipt of customer payments, changes or deletes Transaction and Master records.

REC 3- Reports outstanding A/R broken down into four categories, under 30 days, 31-60 days, 61-90 day, over 90 days.

REC 4- Produces statements of A/R for a single customer or for all customers followed by Cash Projection.

REC 5- Produces a report of all A/R outstanding for a single date or a range of dates, followed by Cash Projection.

REC 6- Lists Transaction and Master files, and accumulates and journalizes A/R (creates entries into MICROLEDGERS JOURNAL file.)

REC 7- Produces a mailable Customer Statement for any single customer or for all customers.

**PRICE:**

**TITLE: ACCOUNTS RECEIVABLE**

**PUBLISHERS NAME: WILSON JONES**

**DESCRIPTION: Features:**

\* Open item system automatically extends unit prices, discounts, calculates taxes, and totals invoices. Has over ride capability.

\* Territory comparison by account and salesman.

\* Credit profile includes average number of days to pay, credit limits, sales comparisons, last purchase date, last payment date, and current status.

\* Telephone numbers on Aged Trial Balance for collection follow-up on slow paying accounts.

\* Receivable adjustments and on-account payments are allowed. Also, the application of service charges can be done on a

selective basis as monthly statements are prepared.

**Reports Generated:**

Invoices; Debit Memos; Credit Memos; Inactive and New Account Lists; Salesman's Account List; Customer List by Territory; Inventory Description Report; Aged Trial Balance; Customer Statements; Accounts Receivable Adjustment Journal; Cash Receipts Journal; and Sales Journal.

**PRICE:**

**TITLE: ACCOUNTS RECEIVABLE SYSTEM**

**PUBLISHERS NAME: MONEY DISK**

**DESCRIPTION:** Provides a complete accounting system for up to 400 charge customers. A maximum of 2500 entries for all accounts per month may be processed. The number of entries for a single account is unlimited except by the maximum. In addition to the usual account billing, recording cash received and charge sales, the program provides a means for entering sales information and printing sales invoices and packing slips. The system also prints four collection form letters and address labels for envelopes and file folders. Address labels may be printed for the following groups: 1) All customers (complete Zip code list), 2) Business Names only, 3) Non-business listings, 4) Area listings for all customers in one or more Zip Code areas. All program functions are accessible by entering a selection number from a menu of options.

Account balances are maintained for current month, 30 days, 60 days, 90+ days past due for each account and grand total. Year to date and monthly total purchases, discounts, service charges and bad debts are accumulated for each account and summarized. Courtesy discounts and late payment service charges are automatically applied if previously authorized. Debit and Credit Memo processing corrects the applicable summary total. Inactive and closed accounts are flagged. Routine (same each month) charges are automatically processed.

Monthly statements are printed for all accounts with current month activity. A promotional header may be entered and printed on statements, invoices and packing slips. Accounts Receivable Status Summary, Aging Summary with Analysis, present Account Status reports may be printed at any time. Invoices and packing Lists may be compiled, stored on disk and printed immediately or anytime later. Journal records may be viewed on screen or printed at any time. Your choice of four collection letters may be printed at anytime. Address labels may be printed for one, two or three across formats. Printed reports are automatically formatted for printers between 80 and 132 columns.

**PRICE: \$225.00**

**TITLE: INTEREST PRINT**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** Compute and bill interest on your accounts due. A great money maker.

**PRICE: \$20.00**

**TITLE: MICROREC**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** Microrec is the Accounts Receivable counterpart package, quite similar to the A/P system.

The data employed by MICROREC include:

Customer name and address

Purchase order number

Invoice number

Invoice date  
Amount  
Description  
Quantity Invoiced  
Waybill Number  
Ledger account number to debit  
Ledger account number to credit  
"Conversational" programs help you enter the data rapidly and easily. A transaction file holds your A/R until a period is ended and you want to accumulate them into the master file. The master file is a permanent record of all A/R entries and customer payment receipts. Both the transaction file and the master file may be easily inspected and updated at any time. There are several reporting routines. You may ask for the following outputs:  
Print invoices  
Aged Trial Balances (under 30 days, 31-60 days, 61-90 days, over 91 days)  
Receivables by customer. You have the option to request report for a single customer or for all customers.  
Receivables by Date. In this program you can ask for a statement covering a single date or a range of dates. The statements will also produce the corresponding cash projections.  
Finally the journalizing option will create the journal file entries that correspond to each A/R as it is entered as well as to the receipt of each customer payments as it is input. These transactions will ripple through your trial balance, costing, profit and loss statement and balance sheet - if you are also a user of MICROLEDGER.  
**PRICE: \$140.00**

**TITLE: RECEIVER**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** A complete invoicing and accounts receivable ledger system. The key to this element is the package's flexibility. You can use the system if you bill only with invoices. You can use it if you only send monthly statements. If you use both they are there at the touch of a key. The system will also generate packing lists and back order slips for users preparing invoices.  
**PRICE: \$65.95**

**TITLE: SYSTEMS II EX - ACCOUNTS RECEIVABLE**

**PUBLISHERS NAME: WESTWARE SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: Two disk drives, 132 column printer**

**DESCRIPTION:** ACCOUNTS RECEIVABLE may be purchased as a standalone or can be configured with various modules of the full SYSTEMS II EX.

The 5 1/4" diskette version holds up to 400 Customers, 5 Meg. Corvus, 2600 and the 10 Meg. Corvus 10,400. 400 open Receivables invoices can be held on the 5 1/4" system, and 2000 on the 5 and 10 Meg. Corvus.

Accounts Receivable keeps a running list of invoice, produces aging reports and statements.

**PRICE: \$425.00 for 5 1/4" Floppy**  
**\$475.00 for Corvus**

**TITLE: THE COMPUTERPROGRAMMED ACCOUNTANTCPA 2 ACCOUNTS REC.**

**PUBLISHERS NAME: CONTINENTAL SOFTWARE**

**DESCRIPTION:** Prints invoices on available custom forms or on plain paper. Back orders and extensions computed, issues statements for all customers, one or more customers, or only

those with current, 30-, 60- 90-, or 150-day balances. Maintain up to 300 customers. Customized journals. Allows simulation of manual special journal entries. Posts to General Ledger. Prints aging report to 150 days. Also prints customer lists and labels.  
**PRICE: \$250.00**



## FINANCIAL MODELING/PLANNING

**TITLE: APM**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**HARDWARE REQUIREMENTS: 132 column printer**

**DESCRIPTION:** APM is CPM (Critical Path Management) for the Apple. Especially useful for contractors it is a powerful, easy-to-use critical path method, designed for large scale production planning.

For example: Before building a house, sub-contract work and delivery of materials must be scheduled so construction proceeds smoothly. Organizing the efforts of each individual involved requires a lot of planning.

With APM you can organize hundreds of chores and activities into a single network of interrelated tasks. On a single disk about 2000 activities can be organized.

Based on time estimates you assign each task, the program computes your project's schedule and its critical path - the succession of deadlines that must be met for your work to finish according to plan.

With this valuable tool you'll know if you're ahead, behind, or right on schedule.

- lets you use the power of your Apple to plan and track networks, as well as to generate reports so you avoid time consuming clerical activity;

- provides an easy-to-use interactive alternative to timesharing so you can process data whenever you want, and analyze results immediately;

- is a powerful modeling tool so you plan with greater foresight than you would using pencil and paper.

In preparing a network, you need to define and number your sequence of tasks, then estimate the amount of time each one will take. Enter this information using APM's Create/Change Network menu option.

Then, establish real-date calendar parameters - including "month/year" project start and finish dates, and working/non-working days in your week. You can either load a calendar format you've previously created or choose the System Maintenance menu option to generate a new one. Projects will be scheduled according to your calendar parameters.

APM's Analyze/Print Current Network option then processes and transforms your input into a schedule that indicates the project's critical path. With this option, you can print out any one of five reports to help you evaluate and refine your network, then incorporate modifications using the Create/Change Network option.

Once your project is underway, you can edit and update your network on a regular basis.

Printouts include:

Standard Report, Selective Report, Milestone Report, and Short and Long Term Bar Charts.

**PRICE: \$235.00**

**TITLE: APPLE II SENIOR ANALYST**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** A software program for the Apple II, which represents the next generation of tools for financial planning and analysis, has been introduced by Apple Computer, Inc.

Apple II Senior Analyst is a modeling program that allows planners to analyze and review data. Since the program acts as its own data base, models created on Senior Analyst can be consolidated for big-picture analysis.

Models based on the consolidated data can then be extracted for study.

The package automatically generates printer reports in plain English. Other features are built-in functions including sum, minimum, maximum, three kinds of depreciation and linear regression forecasting.

**PRICE:**

**TITLE: APR LOAN ANALYSIS**

**PUBLISHERS NAME: REALTY SOFTWARE**

**DESCRIPTION:** This program module has been prepared specifically for loan brokers, investors or others interested in the actual annual percentage rate (APR). It provides the ability to evaluate and compare various loans based on the time period, indicated interest rate and loan fees (points).

The true APR may be derived by varying any one of the three basic parameters to establish the best interest rate available among any number of options.

**PRICE: \$20.00**

**TITLE: BASIC INDIVIDUAL RETIREMENT ACCOUNT**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Shows the advantages of a tax-deferred savings program. This program calculates and illustrates a year-by-year comparison. Including rollover from another account; can also show spousal contribution.

**PRICE: \$295.00**

**TITLE: BUSINESS PLANNER**

**PUBLISHERS NAME: DUOSOFT CORPORATION**

**DESCRIPTION: FEATURES:**

- \* Projections updated by the actuals data
- \* Moving time window
- \* Protected data by a password
- \* Projections by graphics
- \* Reports customized for your business
- \* Tutorial documentation
- \* Sample business data
- \* Financial statements

You are able to group employees, equipment, and other costs into an income producing project.

Examined independently or combined, a model will show the net result of the projects. Crucial timing decisions can be made by starting projects at different times.

As your business expands, models can be combined into larger ones. Every new venture can be put under the master plan.

You have the BUSINESS PLANNER to continue working for you.

In order to focus attention on problems that may affect future performance, the BUSINESS PLANNER will compare actual results against the projected models. "What if?" situations can be developed to help plan for the the unexpected future.

**PRICE: \$295.00**

**TITLE: BUSINESS VALUATION ANALYSIS**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Allows for the valuation of a given business using the methods of Book Value, Capitalization of Earnings, and Straight Capitalization.

A useful tool in valuing the closely held family business.

The program projects 5 - 10 - 15 years hence.

**BUS-10**

**PRICE: \$475.00**

**TITLE: CAPITAL INVESTMENT ANALYSIS**

**PUBLISHERS NAME: MPA ENTERPRISES**

**DESCRIPTION:** Analyze capital investments as a return on investment, net present value, or internal rate of return. Uses annual cash flows as input.

**PRICE: \$25.00**

**TITLE: CASH-FLOW ANALYSIS**

**PUBLISHERS NAME: ALPHA-OMEGA SYSTEMS, INC.**

**DESCRIPTION:** Predicts cash crunch. Determines optimum cashflow using payment priorities and receivable probabilities. Measures impact of possible purchases on cashflow. Documents financial ability.

**PRICE: \$129.00**

**TITLE: COMMERCIAL ACCOUNT PROFITABILITY ANALYSIS**

**PUBLISHERS NAME: PACIFIC BANCORPORATION DATA SYSTEMS, INC.**

**DESCRIPTION:** 1. Allows managers of financial institutions the ability to determine profit or loss on specific commercial accounts. DDA activity, time deposits, and loan balances and rates are all used as a basis of comparison to expenses incurred for handling specific accounts. Income may be increased by requiring customers to maintain a larger minimum balance or by assessing a hard dollar charge against the DDA balance.

**PRICE:**

**TITLE: CONSTRUCTION COST/PROFIT ANALYSIS**

**PUBLISHERS NAME: REALTY SOFTWARE**

**DESCRIPTION:** This program is designed to aid builders and investors in making knowledgeable decisions concerning building project potential profits.

The analysis considers the effects of interest rates, legal fees, demolition, building costs, land costs, land draw and financing on the total amount of cash necessary for completion of the project. The analysis also calculates the return on investment, leverage achieved and total dollar profit potential based on user estimated sales price.

As many scenarios as desired may be analyzed varying the amounts of building costs, land cost, interest expense and other construction cost data. Potential projects may be analyzed varying the amounts of building costs, land cost, interest expense and other construction cost data. Potential projects may be analyzed allowing the comparison of different construction on the same building site or similar construction on different building sites.

Analysis may be printed for a permanent record. This is a good series.

**PRICE: \$20.00**

**TITLE: CORPORATION FEASIBILITY STUDY**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Shows a side-by-side comparison of investment, insurance, and taxation costs for both an incorporation plan and for the present investment plan.

**PRICE: \$250.00**



**TITLE: CREATIVE FINANCING****PUBLISHERS NAME: HOWARD SOFTWARE SERVICES**

**DESCRIPTION:** Whether you invest in bonds, stocks, income property, or trust deeds, or you just want to determine the true cost of your home mortgage or consumer loan, this package will aid you in intelligent decision-making. Realistically see the direct impact of inflation, time value of money, taxes, and cash flow timing, and play "what if" with the confidence that all important factors are properly handled. It is now possible in just a few minutes to objectively compare dissimilar loans and investments with the realism formerly achieved only by the few financial wizards who could complete analyses of this type in a few hours. This package is indispensable for anyone who invests with borrowed money.

**Practical Printouts for Intelligent Decision:**

- \* Monthly interest & principal payment schedules for complex loan packages - multiple trust deeds, wraparounds, amortization, interest only, variable interest rates, delayed payments, balloons, rebates, mid-year starts, add-on interest, simple interest.
- \* Annual depreciation schedules for complex component depreciation - straight line, sum of year's digit, declining balance, automatic conversion to straight line, tax credits, recapture of excess depreciation.
- \* Tabular projections of year-end on-sale profits - internal rate of return, return on investment, return on prior year's equity, net present value, future value.
- \* Tabular projections of cash flows - debts service, tax credits, leases, tax payments, expenses.

**Analyses for Today's Complex Transactions:**

- \* Picks up where our Real Estate Analyzer let off
- \* Equivalent compound annual interest rate of loan package
- \* Yield to maturity for discounted bonds
- \* Present value of complex annuity schedules
- \* Value of ownership vs. sale-leaseback
- \* Profit comparisons for dissimilar investments
- \* Risk evaluation through "what if" comparisons

**Friendly Software for Efficient Operation:**

- \* Extensive documentation, complete with tutorials and sample analyses for the financial novice
- \* Error-tolerant and trouble-free for use by the computer novice
- \* Flexible, professional, paginated report generation for impressive reports on all printers.

**PRICE: \$150.00**

**TITLE: DEPRECIATION****PUBLISHERS NAME: MONEY DISK**

**DESCRIPTION:** This group of programs by Money Disk provides a complete system for depreciating up to 800 capital assets. The system capabilities provide for any of seven depreciation methods including ACRS for 1981-1985. Pickup previously depreciated items using last year's tax return or your present depreciation schedule. Purchase cost or basis may be up to \$1 million for any period from one to 99 years. The system also calculates Investment Tax Credit, pro-rates depreciation when necessary, and allows conversion of depreciation method with Inventory, Disposed Property List and Recovered Cost List. Any report may be printed at any time. The Depreciation Schedule and Recovered Cost List may be viewed on the screen or printed as desired. Monthly and year to date depreciation are calculated for each item as well as the grand total depreciation, total accumulated depreciation, present book value, total ITC, total amount invested and total salvage value. The Disposed Property List reports all items



which have been sold, including the sales price, initial cost and basis, total depreciation to sale date, and tax gain or loss. The Equipment Inventory is a management tool for physical inventory and recording condition and operating status of industrial equipment.

**PRICE: \$225.00**

**TITLE: DESKTOP/PLAN II**  
**PUBLISHERS NAME: VISICORP**

**DESCRIPTION:** The Desktop/PLAN II (TM) program gives you a fast and easy way to automate and organize all your financial analysis, budgeting, and business planning.

The program guides you step-by-step in easy stages, from the original layout of your budget or plan through final computerized calculation and print-out of a board-room quality report. It can produce its own line charts and bar graphs, too - for greater visual clarity.

Complex and frequently used financial calculations - even multi-step operations using chains of tests and formulae - become easier, quicker to handle. And Desktop/PLAN II can handle very large financial "models", too. This makes it especially useful for consolidation across departmental budgets and combining the results of identical models into an overall company budget with ease and simplicity.

If you currently use timeshared financial modeling programs, you'll find Desktop/PLAN II familiar and easy to use - and no more monthly timeshare bills! If you've never done financial modeling, Desktop/PLAN II can introduce you to an easier and more productive way of financial planning and budgeting than the laborious manual methods of the past.

You can produce a high quality, professionally organized print-out of your plan or model with Desktop/PLAN II. The format is much like an accountant's columnar analysis pad - it can be up to 18 columns wide or up to 300 rows deep. Pagination, headers which carry your model's title, and other report features are handled automatically by the program.

And Desktop/PLAN II can receive information from VisiCalc - an interchange capability giving you greater combined usefulness. Desktop/PLAN II offers exceptionally powerful planning system features in a package which operates at your desk and at your convenience.

**PRICE:**

**TITLE: DISCLOSURE STATEMENT**  
**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Designed to complete the Replacement form required by many states. It will provide a comparison of the proposed policy with up to four existing policies. Up to ten different cases may be entered at once.

**Explanation of Computer Print-Out:**

There will be one disclosure page printed for each existing policy. If there is more than one policy, a summary page will be printed after all of the existing policy disclosure pages are printed. The summary page (where applicable) compares the proposed policy with the totals of all the existing policies.

The program prints text that accompanies each disclosure statement. Some of the answers to the questions have been supplied while others should be filled in on an individual basis. Space is provided for any signatures required by law.

**PRICE: \$90.00**

**TITLE: ECONOMIC ANALYSIS GROUP**

**PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: BUY VS LEASE DECISION**

This program allows the industrial engineer to input information such as initial cost, leasing cost, depreciation methods, rate of return, etc. for the Buy vs Lease equipment decision. The program does an economic analysis, reporting the equivalent annual cost and choosing the appropriate decision alternative. Income tax is considered in the decision.

**PROGRAM 2: RATE OF RETURN ANALYZER**

This program performs a direct computer search in order to determine the rate of return achievable from a cash flow which describes a particular project. The program will give the industrial engineer an expected rate of return for projects he may wish to analyze.

**PROGRAM 3: DECISION TREE ANALYSIS**

This program allows the industrial engineer to describe a sequential decision by a decision tree. The tree includes discounting of money and probabilistic futures. After the network has been described, the program proceeds to determine the most attractive decision sequence through the tree.

**PROGRAM 4: AFTER TAX CASH FLOW ANALYSIS**

This program allows the after tax analysis of projects which involve varying lives, initial investments, interest rates, salvage rates, annual costs and annual incomes. The program also considers straight line, sum of years digits and double declining balance depreciation methods. The program then proceeds to report the after tax evaluation of the project and determines the present value of the cash flow based upon a company's annual rate of return.

**PRICE:**

**TITLE: ESTATE VALUATION ANALYSIS**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Illustrates the estimated savings in Estate Settlement Costs that can be generated by establishing an A-B Marital trust. In addition to comparing estimated Estate Settlement Costs With and Without a Trust, there is a Capital Needs section which illustrates the estimated need for estate liquidity.

**Assumptions:**

1. The use of an A-B Marital Trust assumes that there is a marriage. The A-B Trust concept will not work for single, divorced or widowed clients.
2. Death occurs at least 10 years apart. Therefore no orphans exemption is applied. This assumption creates the largest capital need.
3. Retirement plan value will be paid in a lump sum. And both retirement plan value and Life Insurance will be put into the Trust.
4. Probate and Administrative fees will be calculated at 6% of the appropriate assets.
5. Use of the program assumes knowledge of Estate Planning and the A-B Marital Trust concept.

**PRICE: \$575.00**

**TITLE: F.A.S.T.**

**PUBLISHERS NAME: NIBBLE**

**HARDWARE REQUIREMENTS: Serial or Parallel Printer, and an optional Disk**

**DESCRIPTION:** (Forecasting and Sales Trending). A simulation and modeling tool for testing different strategies in selling multiple products and services. Prompts the user to build a Productivity Model which is then used to test different Hiring Rates, Pricing, Product Emphasis, and Product Introduction Timing. Produces 4 different Reports including Unit Sales and Dollar Sales by Month/Quarter.

**PRICE: \$24.95**

**TITLE: FAMILY SECURITY NEEDS ANALYSIS (FSNA)**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**ZIP:**

**TELEPHONE:**

**LANGUAGE: Applesoft BASIC**

**HARDWARE REQUIREMENTS:**

**DESCRIPTION:** Estimates your prospect's need for life insurance and savings to accomplish his financial goals.

**Assumptions:**

1. The FSNA will work for a married couple or a single parent.
2. Social Security is estimated based on the assumption that the Head of Household has always earned the maximum income that is subject to F.I.C.A. taxes.
3. Any lump sums used to generate income are depleted by the monthly withdrawals.

**PRICE: \$575.00**

**TITLE: FINANCIAL**

**PUBLISHERS NAME: COMPUTER HOUSE DIV/FLC, INC.**

**DESCRIPTION:** This is really a group of programs to compute many financial routines. Routines includes: amortization, loan payment & total interest, last payment, principal, % of interest, remaining balance, term of loan, interest from an investment, future value of an investment, internal rate of return cash flow analysis before and after taxes, installment sale analysis and record of investments.

**Note:** Record of investments covers over 700 stocks, bonds, bank accounts, etc.

**PRICE: \$175.00**

**TITLE: FINANCIAL GOALS ANALYSIS**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** The Financial Goals Analysis is a series of three programs designed to assist you in creating a financial road map to attain your client's goals. The three Programs are:

**I. Compound Interest Analysis:**

Allows you to project the effect of compound interest over a period of years. There are several important variables that provide the flexibility to make various assumptions.

**Assumptions:**

1. The Interest Assumption can be changed from year to year.
2. An Inflation Assumption of your choice allows illustration of the need for increasing the periodic investment over the years.
3. Monthly, Annual and Lump Sum investments may be assumed. Periodic investments (Monthly or Annual) can be changed from year to year.
4. Interest can be compounded daily, monthly, quarterly, semi-annually, or annually.
5. The effect of taxes is illustrated with your choice of assumed tax brackets.

**II. Withdrawal Analysis:**

Illustrates the effect of monthly withdrawals from a cash fund



over a period of years.

Assumptions:

1. That the entire cash fund will be depleted over a period of years.
2. An Inflation Assumption allows an illustration of the increasing withdrawal necessary to maintain purchasing power.
3. An Interest Assumption of your choice.
4. The effect of taxes is illustrated with your choice of assumed tax bracket.

III. Savings to Meet Withdrawal Goals:

Illustrates the amount that must be saved every month to achieve a given monthly withdrawal at the end of a period of years.

Assumptions:

1. Your choice of assumed monthly income desired.
2. Withdrawal period may be varied.
3. Interest assumptions may be varied.
4. An inflation assumption allows an illustration of how monthly savings must be increased to meet withdrawal goals, and the increasing withdrawal necessary to maintain purchasing power.

PRICE: \$250.00

**TITLE: FINANCIAL MANAGEMENT SYSTEM III WITH CHECKWRITER III**  
**PUBLISHERS NAME: COMPUTERIZED MANAGEMENT SYSTEMS**

**DESCRIPTION:** A professional business and home accounting system designed to provide a quick and comprehensive system for the financial management of any small business and household. A truly flexible single entry accounting system that works the way you want it to!

**SOME OF THE SPECIFIC FEATURES INCLUDE:**

UNLIMITED NUMBER of checkbooks, charge cards, savings, petty cash and even separate business accounts can all be maintained with this one program.

UNLIMITED NUMBER of records through the use of file chaining.

UNLIMITED NUMBER of single entry disbursements to separate accounts are allowed.

REAL TIME file balances as entries are made.

AUTOMATICALLY balances your checkbook.

AUTOMATICALLY reconciles your bank accounts with single key entries.

AUTOMATICALLY assigns a tax-budget-account code, (up to 100 unique user defined codes) as entries are made for tracking tax deductible and budget items.

HIGH SPEED & USER FRIENDLY data entry system.

EXTENSIVELY DOCUMENTED with over 200 pages of step by step instructions in a "stand-up" easel binder.

REPORTS to both screen and printer for listing disk files, bank balance, reconciliation, budget, audit, search and account code lists plus custom reporting capabilities using the search features.

ALL RECORDS may be edited at anytime for any previous month or year.

DUAL DISK 80 & 132 COLUMN PRINTERS SUPPORTED

SUPPLEMENTAL PROGRAM PORT for future program modules to further expand the program capabilities.

AUDIT REPORT sub-totals by month with year-to-date totals for all tax deductible, budget, income and expense codes.

BUDGET REPORT gives actual and budgeted amounts with variance and comparisons with all months and a complete summary.

SPECIFIC APPLICATIONS & REPORTS FOR ASSET & LIABILITY management, INVENTORY management and multiple account TRANSFER OF FUNDS.

INSTANT screen recall of up to 200 user defined 1-3 key abbreviation which make data entry quick, error free and easy.

SEARCH & REPORT on any given data using specific and expanded



searches.

SELF PROMPTING error avoiding entry system with default values and instant error correction for easy data entry.

MULTIPLE DISK capability with disk-to-disk and year end balance roll-over applications.

CHECK PRINTING from file records allow for formatting of the check to print data in any location on any size, type of style of check. Standard check format also included.

AUTOMATIC check addressing for use with window envelopes.

ADDRESS file maintenance for vendors.

LABEL PRINTING from address file.

**PRICE: \$149.95**

**TITLE: FIXED ASSETS**

**PUBLISHERS NAME: WILSON JONES**

**DESCRIPTION: FEATURES:**

- \* Eight different depreciation methods can be utilized independently for book and tax depreciation on various assets. Three year depreciation projections on an existing asset base. Investment Tax Credit computations are automatic.
- \* The IRS requires annual reporting on assets converted to straight line depreciation method. This report is provided along with other data at year-end.
- \* Fixed Assets programs enable depreciation of asset lifetimes of up to 99 years, and serial numbers for those assets of up to 5 digits.
- \* Flexibility to specify asset groups, departments, locations using 4 and/or 6 digit code instructions. Monthly reports of book and tax depreciation are generated. New asset acquisition, as well as the "retirement" of fully depreciated assets may take place at any time during the year.
- \* Depreciation expense can automatically be posted to General Ledger package.

**REPORTS GENERATED:**

- \* Fixed Asset Register
- \* Fixed Assets by Class
- \* Asset Acquisitions Journal
- \* Asset Retirements Journal
- \* Book Depreciation Journal
- \* Tax Depreciation
- \* Depreciation Projections
- \* Year-end Review of Assets

**PRICE:**

**TITLE: KEOGH**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Provides a summary page for all employees, including their sex, age, employment date, salary and defined contribution. Each eligible employee is then detailed in an individual summary, providing insurance cash value, P.S. 58 cost, both current and guaranteed annuity accumulated cash values, as well as total death benefit, face amount, insurance premium and annuity payment on the plan.

Each employee also receives an Age 65 Summary, presenting deductible contribution, tax savings, accumulated cash value, gain over after-tax investment and monthly income at age 65, both current and guaranteed.

**PRICE: \$450.00**

**TITLE: KISS FINANCIAL PROGRAMS**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Choose any five of these valuable programs that are appropriate for your needs:

- Ledger Statements
- Mortgage acceleration Program
- Estate Valuation Analysis
- Minimum Deposit Illustrations
- Split Dollar Illustrations
- Term/Whole Life Comparison
- Capital Needs Analysis
- Term insurance illustration
- Amortization & Depreciation Schedule
- Financial Goals Analysis
- Ledger statements - Whole Life
- Mod Whole Life (Deposit Term) Ledger

KISS is available now for immediate inspection and review.

**PRICE:**

**TITLE: LEDGER STATEMENT - WHOLE LIFE**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Illustrates a 20 year ledger and an age 65 summary of a Par or Non Par Whole Life Policy.

**PRICE: \$250.00**

**TITLE: LOAN AMORTIZATION**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Illustrates how periodic payments affect the loan balance. Payment is split between principal and interest and cumulative totals are shown. Any interest rate may be illustrated monthly, quarterly, or annually.

**PRICE: \$90.00**

**TITLE: LOAN DEPRECIATION**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Computes a depreciation schedule by any of four methods:

- 1) Straight Line
- 2) Sum-Of-Years-Digits
- 3) Double-Declining-Balance
- 4) Units-Of-Production

**PRICE: \$90.00**

**TITLE: LOAN REDUCTION ANALYSIS**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A useful application to testing alternate financing methods for your major purchases. Simple prompts for Interest, Changes in interest, Loan Term, etc. produce a screen full of resulting payments (while varying the principal and interest).

**PRICE: \$19.95**

**TITLE: MICRO-DYNAMO**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

**DESCRIPTION:** Computer users now have a language that can construct and execute continuous simulation models to study social, economic, biological, business psychological, and engineering systems. These models are useful when the behavior of the system depends more on aggregate flows than upon the occurrence of discrete events. Since the problems of top policy and decision-makers generally do not involve individual orders or particular machines, this is vitally important.

For example, the problems of a major city are not solved on an individual basis. An engineer is not concerned with the behavior of a single molecule. These problems can be studied and solved by by aggregating all of the events into a continuous flow and putting this flow into variable that affect it and are affected by it.

DYNAMO was designed to be an effective aid in simulating these types of models. The novice will easily understand the language. There is no previous computer experience needed. Also, the instruction that accompany Micro-DYNAMO clearly explain what the user needs to know about the system.

THE MICRO-DYNAMO HAS THESE FEATURES:

- \* Detection of errors is thorough and the reporting is clear
- \* Tabular and graphical output is easily specified, including color graphic output
- \* Small models or sections of larger ones can be designed to test implications of policy changes
- \* Models of organizational problems can be constructed by management and health management consultants
- \* A user can concentrate on the problems without being concerned about the technical details of a computer language
- \* A number of delay, logical, and trigonometric functions -- and two powerful table functions are all included in the DYNAMO language
- \* Complicated systems are simple with the easy-to-use language
- \* Suitable for schools teaching system dynamics

PRICE: \$245.00

**TITLE: MINIMUM DEPOSIT PROGRAM**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:**

**General:**

Illustrates the effect of borrowing all or part of available cash values to pay the annual premium.

**Assumptions:**

1. Interest on the policy loan is assumed to be paid out of pocket by the insured.
2. Interest on the policy loan is assumed to be payable during the same year that the policy loan is made.

PRICE: \$250.00

**TITLE: MOD WHOLE LIFE (DEPOSIT TERM) LEDGER**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Illustrates Premium, Cash Value and Death Benefit of a particular Deposit Term Policy. The illustration is personalized with the client's name, age, and sex and the appropriate policy values are shown.

PRICE: \$250.00

**TITLE: MORTGAGE ACCELERATION PROGRAM (MAP)**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Designed strictly as a Prospecting Tool. To get the most value from MAP, be sure to review the MAP Sales Presentation. As you will see, the Presentation is designed to accomplish three objectives:

1. Obtaining appointments on a favorable basis.
2. Strengthening your image as a Financial Planner, and
3. Creating an opportunity for you to review your prospect's life insurance program.

The experience of Planners who have successfully used MAP show that the use of the Sales Presentation with the brochure A



Computer Analysis of Your Mortgage Acceleration Program is key. When you have made this presentation to your prospect and reviewed his policies you can prepare a personalized presentation of the effect on your prospect's mortgage.  
**PRICE: \$345.00**

**TITLE: MULTI-YEAR PLANNING MODEL**

**PUBLISHERS NAME: PACIFIC BANCORPORATION DATA SYSTEMS, INC.**

**DESCRIPTION:** 1. User develops long term strategies for profitability and uses built in modeling capabilities to determine the effect of these strategies on the projected long term profitability and capital adequacy of the institution. Model produces full range of financial ratios, and features user definable assets, liability, equity, revenue and expense accounts.

**PRICE:**

**TITLE: OPTIONS 80**

**PUBLISHERS NAME: OPTIONS 80**

**DESCRIPTION:** Does the arithmetic of options investing for you, so you can make the judgement decisions with an uncluttered mind. Inputs are the option prices from the Wall Street Journal, or equivalent. Investments among the 10 possible types of transaction can then be tested, using a menu format. The program generates your choice of either a plot or a table, showing the return on investment against movement of the share price. All results are presented as an annualized percentage, taking commissions, dividends, etc. into account. The 41-page manual is a complete guide to option investment, as well as an instruction manual for the system, and is supplied in a handsome binder. The tables can be printed by any machine compatible with your computer. Information is included for using the graphical capability incorporated into some printer, for printing out graphs.

**PRICE: \$125.00**

**TITLE: ORDER TRACKING SYSTEM**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** This program helps independent sales professionals to process, locate, and analyze sales information. This easy-to-use sales management program lets you keep tabs on principal revenue generators, calculates commissions, maintains monthly sales reports, and analyze sales effectiveness.

It eliminates the clutter and time-consuming drudgery of conventional record keeping. With it, you can help ensure that that your business grows in a profitable, orderly fashion.

- tracks and analyze customer, product, and sales force activity so you know exactly where your strengths lie;

- tabulates daily sales information cumulatively so you can instantly generate up-to-date monthly reports;

- computes complicated multiple commission rate orders automatically so you avoid performing inaccurate, time-consuming calculations;

- stores up to 100 random purchase orders per disk, or uses separate disks for each product or customer so your records stay organized as your sales grow.

To use this program you need to first choose the Set Today's Date option and enter the date. Then, Order Maintenance lets you log orders, whether you're entering a new order or updating an existing one. For supplementary data, choose the Order Inquiry option, which allows you to add or recover information on partial



shipments, status of purchase orders, and special commission rates. Especially useful for keeping in touch with customer-related problems.

This program's Compile Sales Data option lets you process and store disk data, taking only a few moments to separate order information into proper categories. With it you can compile the necessary information to print all sales reports.

The Printed Reports option gives you a Reports Menu, which lets you generate various printouts to interpret sales factors and performance. Sales Reports lets you generate reports on updated sales activity.

Example: Salesman Analysis compares the performance of your individual salespeople on a month-to-month basis. Used with Commission Status, it identifies which products and customers fatten your commission paycheck, and those that amount to a waste of time.

Order Reports is a second Printed Reports option which lists orders by customer or principal, and lists all expedited orders which lets you instantly verify orders and list corresponding action items. Access to this data can save you lots of trouble.

Copy of Purchase Order is a third Printed Reports option which lets you print out purchase order data for hard-copy files. It tactfully omits commission rate information when generating customer copies.

**PRICE: \$50.00**

**TITLE: PERSONAL FINANCE MASTER**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** The premier personal and small business financial system. Covering all types of accounts including check registers, savings, money market, loan, credit card and other asset or liability accounts, the system has these features:

- Monthly Transaction Reports
- Budgets Income & Expense
- Reconciles to Bank Statements
- Prints Checks & Mailing Labels
- Automatic Year-End Rollover
- Prepares a Net Worth Report
- Searches for Transactions
- Handles Split Transactions
- User-Friendly Data Entry Forms
- Fast Machine Language Routines
- Extensive Error Trapping
- Hi-Res Expense/Income Plots

**PRICE: \$74.95**

**TITLE: PLAN80**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** A powerful modeling tool for financial planning and analysis that lets you tackle any numerical problem that can be defined in row and column format. It performs complex calculations quickly and precisely, letting you examine "What if?" questions so you can evaluate more planning alternatives in greater detail-without tiresome erasing and recalculation.

You'll get more than your calculated results - you'll know how you got them. Calculation rules are defined by simple and familiar names, such as "SALES = UNITS x PRICE," so you can review your assumptions and methods with people who have never seen PLAN80, and remember how you produced your results months after constructing a model.

PLAN80 doesn't require any knowledge of programming. Anyone in your organization can add or change data to generate updated

budgets, forecasts, and financial reports in minutes. Freed from tedious clerical activity, you'll have more time to use the results to plan, analyze, and manage.

The program lets you:

- \* format and store reports exactly to your specifications so you can create polished business plans for your screen, printer, or to be included in written reports
- \* use separate files as the program is running so you can define one set of modeling rules to be used by many applications, or use one application to handle an unlimited number of data sets
- \* transfer files from one disk to another so you can use the same data in different applications, or consolidate data from various files into a single, summary file

Can be used for any application requiring a worksheet, including cost estimating, cost center budgeting, cash management, sales projection and analysis, resource allocation, inventory planning, risk analysis, profit planning, and tax planning.

Creating a model is as simple as writing a letter, except with PLAN80 you use statements instead of sentences. First you define the framework of your model, listing row and column names in familiar terms such as UNITS, SALES, and APRIL. You may also specify heading, description, line spacing, decimal position, and other features to make your reports more visually effective.

Next you enter data values and calculation rules. Powerful mathematical functions are built in to help you perform complicated calculations with a single statement.

At any point in the model you can display or print results on your screen or printer, save all or part of those results for use by another model, or play "What if?" by inputting new values, recalculating, and then displaying or printing the new results. Because headings, rules, and data are all listed together in the program, you can instantly make changes in your model.

PRICE: \$185.00

**TITLE: PROJECT CONTROL AND REPORTING (CORE)**

**PUBLISHERS NAME: MICROMATICS, INC.**

**HARDWARE REQUIREMENTS: 16K Expansion Card, Printer, Pascal language ca**

**DESCRIPTION:** Performs the project management monitoring, control and reporting necessary to do the day to day management based on project progress. CORE is not able to operate without PAL.

CORE takes over, once a schedule has been determined using PAL.

The facts concerning the progress of an activity is given to CORE and CORE gives an analysis, reports and projections of the completion based on the work performed.

Two reports are given:

\*ona detailed level for activities

\*a summary cost information, little completions and estimated finishing dates

These reports can be used to monitor progress and analyze project progress down to a very detailed level. The project manager is able to tell when a project has trouble and where the trouble is from.

Once the cause has been determined, then the project manager may return to PAL for the determination of priorities, impacts and probable rescheduling and resource changes.

A modified schedule may be developed which takes into account the present progress of the project. Simulations, using PAL, may be run to evaluate the changes on the schedule.

CORE has all the features usually associated with a project management control and reporting system in addition to having the ability to quickly reschedule. The immediate availability of the computer and the PAL/CORE combination provide a dimension in project management which has not been provided previously at any

cost.

**CORE'S FEATURES:**

- \* Makes an estimate on cost of a project
- \* Provides for the collection of estimated resource expenditures to complete activities
- \* Gives a progress report on work
- \* Gives financial costs expended
- \* Makes an estimated completion date, based on progress of work
- \* Gives a progress report on specific projects
- \* Stores project progress for later use
- \* Discovers the difference between the planned, actual, and estimated cost of a project
- \* A report is given for management reporting

**THE BENEFITS OF CORE:**

- \* Allows immediate rescheduling and replanning to meet planned costs and schedules
- \* Motivates personnel to the maximum extent
- \* Discovers problems during a project
- \* Helps to communicate the explanation of problems, status, resource justification
- \* Knows how to deal with people - this is especially important

**PRICE: \$475.00**

**TITLE: PROJECT PLANNING AND ANALYSIS (PAL)**

**PUBLISHERS NAME: MICROMATICS, INC.**

**HARDWARE REQUIREMENTS: 16K Expansion Card, Printer**

**DESCRIPTION:** This is one of two programs which provide an integrated approach to project management. The other program is Project Control and Reporting (CORE) which handles the day to day accounting, cost projections and reporting required for total project management. These two programs used jointly will aid in increasing productivity for all work which requires planning and scheduling of all types of resources - including people.

PAL provides the closest thing to an assistant that the project manager could desire without the addition of another staff member. This tool keeps the project manager asking the right questions at the right time - with project planning the analysis literally at his finger tips.

Combining PAL and CORE will provide a full project management system and as such can be used in all phases of a job. These programs can be used in contract negotiation, proposal estimating, scheduling, planning, monitoring and reporting project status.

**Features:**

- Resource scheduling and resource assignment. Resources are identified and allocated as required to each activity.
- Identifies the project work breakdown structure. The computer's exactness requires the project manager to identify all the work to be accomplished and the sequences necessary to accomplish the work.
- Generates a detailed project schedule with starting and finish dates to accomplish the project in the shortest period of time.
- Generates a project network activity chart showing the relationship of work activities.
- Provides project activity network analysis for the proper sequencing and prioritization of work activities.
- Provides a uniquely simple graph-like report of the project network dependencies which aids the project manager in visualizing his project plan.
- Has project oriented input data which simplifies the project planning effort. Resources are applied to the project activities as the project requires. This provides an optimized network which indicates the shortest duration for the project to be



completed.

- Provides project simulation. Project activities and resources may be varied and result in an optimal, automatically generated project plan and schedule.
- Provides resource loading graphs which are used in planning, costing, and scheduling.
- Provides a resource leveling capability, which when used in the simulation mode, results in an optimal project plan and schedule with reasonable resource allocations for the project.
- Provides instant access, query and response by using a standalone micro-processor computer system.
- Permits automatic project scheduling from selected project simulations.
- Allows immediate rescheduling capability.
- Has the capability to use a standard deviation in estimating and planning resource levels. PAL will automatically calculate the nominal value for the activity duration with the provided resources. This will result in a reasonable schedule with an associated precalculated risk of project completion.

**PRICE: \$475.00**

**TITLE: QUIKDIRT - CAPITAL BUDGETING**

**PUBLISHERS NAME: WYMAN ASSOCIATES**

**DESCRIPTION:** Your company undoubtedly has several opportunities for capital investment, but limited resources such as cash, key leaders, office space, legal staff, specialized equipment, fuel supplies, etc. This program can show you how to make the best set of investments given your company's constraints. Extensive sensitivity analysis capability lets you determine the effect of changes in revenues, resource limitations, or resource requirements for each project.

If you have several new products (or projects) and you simply don't have enough floor space or sales training time, you can use this package to determine which set of new products gives the best possible payoff subject to your specific limitations. This tool can also be used to explain the amounts of additional resources you would need (e.g. new hires, cash, or floor space) in order to bring the company that extra million dollars of sales.

**PRICE: \$120.00**

**TITLE: QUIKDIRT - CASH REPLENISHMENT**

**PUBLISHERS NAME: WYMAN ASSOCIATES**

**DESCRIPTION:** Virtually all organizations require cash replenishment decisions that are similar to inventory purchase decisions. The more often you visit the bank to use your credit line, the greater your cost of loan fees that are fixed for each transaction. But if you don't visit the bank often enough, you run the risk of cash shortages, plus higher interest costs, since the amount of each transaction will be larger. This program allows you to explore this cost trade-off problem.

**PRICE: \$120.00**

**TITLE: RESTAURANT PROFIT ANALYSIS**

**PUBLISHERS NAME: COMPUTER SYSTEMS DESIGN**

**DESCRIPTION:** A menu item/ingredient profit package for use in analyzing the cost effectiveness and profit margins of menu items in a restaurant business. With the addition of a cash drawer, RPA can serve as a real time register/inventory system.

Operations with an ingredient and recipe data base and a daily input of ticket sales. Breaks down menu items on each ticket to



their component ingredients and updates inventory levels accordingly. Produces daily ticket sales reports, broken down by waiter and waitress; inventory reports and worksheets; ingredient activity reports, and transactions reports, which give a breakdown of each menu item's cost (ingredients, labor, total cost, suggested price and actual price) and weekly and year to date sales (quantity sold, dollar amount sold, % of total sales, % of profit, and profit/sales and key sales ratios). The Key Sales Ratio immediately points out high volume low profit and high volume high profit menu items.

**PRICE: \$495.00**

**TITLE: RETIRED LIVES RESERVE**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Illustrates a two-part program that provides conventional group term life insurance, while employed, and continuous term coverage for life, upon retirement. Two separate funds interact to yield life time coverage with unusual tax advantage and benefits for both corporation and employees.

A summary page for all employees details eligibility, initial amount of insurance, post-retirement insurance and initial term premium. Individual employee output includes term premium paid by employer and RLR, the RLR deposit, total corporate payment, corporate cost and employee taxes.

**PRICE: \$900.00**

**TITLE: SECTION 79**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Illustrates the eligibility of enrollment for each employee individually, providing detailed information on insurance term and endowment premiums, term value, taxable income, tax cost, increase in cash value and employee's personal gain.

A summary Page then recaps all employees, showing initial amount of insurance, premium and term cost and the cash value at age 65.

**PRICE: \$750.00**

**TITLE: SERVICE CHARGE ANALYSIS AND PRICING MODEL**

**PUBLISHERS NAME: PACIFIC BANCORPORATION DATA SYSTEMS, INC.**

**DESCRIPTION:** 1. Allows managers of financial institutions to fine tune their service charge structure in order to increase profitability without a significant reduction in customers. Provides for stratification of customer base by average or minimum DDA balance, and allows user to determine the effect of pricing decisions before actually implementing those decisions.

2. Installation may be handled completely by the user. No computer expertise necessary. DSI will provide assistance over the phone.

3. Apple II plus or Apple III computer, two 5 1/4" floppy disk drives, one video monitor, one 132 character per line printer, one parallel or serial printer interface card, one disk controller card.

**PRICE: \$1000.00**

**TITLE: SPLIT DOLLAR**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Illustrates the effect of this method for a business to assist an employee in purchasing whole life insurance.

**Assumptions:**

1. Company pays premiums.

2. Cash values are left to accumulate.
  3. Dividends, if any, are always used to reduce premiums or buy Paid-Up Insurance.
- PRICE: \$250.00

**TITLE: STATEMENT OF NET WORTH**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Defines and lists the elements used in most financial planning, and presents the information in a logical, easy-to-read format.

PRICE: \$150.00

**TITLE: TAX DEFERRED ANNUITY VS. NON TAX DEFERRED SAVINGS**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Allows you to compare an annuity to the client's current investment program. It also demonstrates the benefits of an annuity over the average investment and shows the client the interest rate at which he must invest to accumulate the same balance as the annuity.

**Assumptions:**

1. A Beginning Lump Sum Deposit can be made and additional deposits can be made monthly or annually.

2. Interest on the current investment can be compounded daily, monthly, quarterly, semi-annually, or annually.

3. If the load is based on year of contribution, it is variable for each year.

If the loan is based on the amount invested, any number of levels may be used.

4. The annuity interest may be compounded quarterly, semi-annually or annually.

5. The assumed tax rate will illustrate the increased benefits of a tax deferred annuity.

PRICE: \$295.00

**TITLE: TERM INSURANCE ILLUSTRATION**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Illustrates the premium and death benefit of a particular term policy based on the client's age and sex. A cumulative total of the premium is also shown.

PRICE: \$145.00

**TITLE: TERM/WHOLE LIFE COMPARISON**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:**

**General:**

Designed to provide a "use of money" analysis to compare the results of continuing with a whole life insurance program vs. term insurance and a Side Fund investment or savings vehicle.

**Assumptions:**

1. This program assumes that the new insurance will be in force for 10 years. At the end of that period, one of four options will be exercised.

2. It assumes the use of a Mod Whole Life (Deposit Term), DART, ART Level Term or Decreasing Term policy.

3. The Side Fund is calculated based on the chosen interest assumption without regard to taxation.

4. All numbers are rounded to the nearest dollar.

PRICE: \$345.00

**TITLE: THE ACCOUNTANT**

**PUBLISHERS NAME: DECISION SUPPORT SOFTWARE**

**DESCRIPTION:** Less than half the financial transactions necessary to adequately manage your resources and plan your tax strategy can be accommodate with single entry systems.

How can you use a double entry system without a refresher course in accounting?

You can't, if you use software that simply automates the way people do things by hand,...but, with The ACCOUNTANT, by Decision Support Software, the power of your computer is harnessed to offer you the advantages of an automated double entry system even if you don't know a debit from a credit!

The ACCOUNTANT includes these user oriented features:

- \* Menu driven operations
- \* Comprehensive prompting
- \* User defined account names
- \* User defined code names
- \* Reference to accounts and codes by name or number
- \* Ability to cancel operations or queries when desired
- \* Ad hoc queries

The ACCOUNTANT is a decision support tool that provides an individual or business with timely, accurate data to plan, monitor and control their finances. the detailed records contained in The ACCOUNTANT's data base will enable you to itemize each and every legitimate tax deduction. DBCALC, a VisiCalc interface, retrieves data from The ACCOUNTANT's data base and creates a VisiCalc file of actual and projected financial data which can be used for financial simulations and tax computations.

**PRICE: \$129.00**

**TITLE: THE IRA ASSESSOR**

**PUBLISHERS NAME: ABT MICROCOMPUTER SOFTWARE**

**DESCRIPTION:** THE IRA ASSESSOR is so user friendly that you can seat your client in front of your Apple and let him discover the benefits of an INDIVIDUAL RETIREMENT ACCOUNT (IRA). You can deal with another client in the meantime.

Five minutes of crisp dialogue with the computer shows the tax advantages clearly and accurately:

- \* Under the new Economic Recovery Tax Act, individuals with earned income may set up an INDIVIDUAL RETIREMENT ACCOUNT on a fully tax-deductible basis, even if they are covered by an existing pension plan.
- \* The annual contribution may be any amount up to \$2000 (\$2250 for married couples with one wage earner) or 100% of compensation, whichever is less, and the amount is tax-deductible.

THE IRA ASSESSOR prompts your input assumptions with a series of five questions:

- \* How much do you want to invest each year?
- \* How many years until retirement or withdrawal of funds?
- \* What is the expected average annual rate of return in percent?
- \* What is your expected marginal tax rate in percent over this period?
- \* Will you withdraw your money before retirement?

Using the responses that you provide to these questions, THE IRA ASSESSOR produces the following information in a set of two tables. For IRA and non-IRA investments in computes:

- \* Total \$ accumulated before distribution - including total invested, tax savings and net income.
- \* Income from 20-year annuity - purchased with accumulated funds.

**PRICE: \$25.00**



**TITLE: THE RETIREMENT PLANNER**

**PUBLISHERS NAME: ABT MICROCOMPUTER SOFTWARE**

**DESCRIPTION:** THE RETIREMENT PLANNER is designed to assist in the development of an individually-tailored financial plan for retirement. You can't be too young to start planning for retirement.

In these times of changing tax law, double-digit inflation, variable interest rates and newly-introduced investment vehicles, THE RETIREMENT PLANNER offers these features to help you simplify the planning process:

- \* Prompts you for facts about your household's current financial status, such as:
  - \* Annual Earnings
  - \* Liquid Assets
  - \* Home Equity
  - \* Business Equity
  - \* Real Estate Equity
  - \* Real Estate Income
  - \* Annual Dividends
  - \* Interest Income
  - \* Expected Retirement Age
  - \* Pension Plan Options
- \* Uses national statistics to help you project your likely future earnings, savings and asset holdings as well as events such as college expenses.
- \* Produces a lifetime financial picture covering your pre-retirement and post-retirement situation, including Social Security and pension benefits.

After you have entered your personal financial data in response to the questions, a sequence of graphs are displayed projecting your future income and assets.

After you have viewed the sequence of graphs, THE RETIREMENT PLANNER gives you the opportunity to explore alternate scenarios: You can ask, "what if?"

What if you retire later?

What if you establish an IRA?

What if your pension plan changes?

And other questions, too, like:

How much might you have to save to maintain your standard of living after retirement?

THE RETIREMENT PLANNER adds perspective to your financial planning.

**PRICE: \$85.00**

**TITLE: VERSACALC 16**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** This package has three different functions:

- A Tutorial that shows you how to use a number of undocumented Visicalc features
  - A set of Utilities that make it easy to write auto-executing Visicalc programs
  - A set of Applesoft programs that operate on your Visicalc files to do things that have always wished you could do with Visicalc
- A programmed instruction oriented training device that runs within Visicalc. It explains a number of techniques that are not documented in your Visicalc manual and then gives you the opportunity to experiment with those techniques by entering data into Visicalc models that use the techniques. The three Tutorials include:

- \*A Tutorial on Screen Overlay. This is what happens when you load on Visicalc file when another is already on the screen. This technique can be used creatively to overcome memory limitations, revise sheets already stored on file, and in many other ways.



- \* A Tutorial on Conditional Testing. Many people think the 3.2 version of Visicalc does not support Conditional Testing but three commands allow Conditional Testing. The 3.3 version adds a number of others. A number of examples of how these can be applied are given.
  - \* A Tutorial on Auto executing Visicalc programs. it is possible to enter a string of Visicalc commands (even the ones that execute as you key them in) and save them to disk under a file name. This string of commands can be executed with as few as four key strokes whenever you want. We have used this technique to create menu driven Visicalc programs, roll current month information into YTD fields, insert windows and move the cursor, provide the user with instructions, and more.
- The Versacalc File Manager is a set of Applesoft programs that allow you to do those things you've always wanted to do with the Visicalc that are not supported in the program. The Versacalc File Manager:
- \* Allows you to sort your Visicalc files in ascending or descending order on label, value, or formula fields. The sort typically takes 5-10 minutes and if formulas are moved they are adjusted so they continue to work properly.
  - \* Allows you to create a Visicalc program called Catalog. Anytime you want to catalog your disk from within Visicalc you type/SL CATALOG.
  - \* Allows you to step through your Visicalc disks one file at a time and Lock, Unlock, Print the Commands, or Delete them.
- PRICE:**

**TITLE: VISICALC**

**PUBLISHERS NAME: VISICORP**

**HARDWARE REQUIREMENTS: 40 column display printer recommended**

**DESCRIPTION:** It takes the work out of working with numbers. The VisiCalc program is the powerful electronic worksheet that replaces paper, pencils and calculator to help you solve number problems.

In just seconds, the VisiCalc program can calculate and displays the answers to involved problems you could have spent hours doing by hand.

The speed and versatility of the VisiCalc program make it easy for you to explore more alternatives. You can ask "What if?"...just change any number in your problem and instantly the program recalculates all the numbers and displays the new results. So you can readily analyze the impact of decisions before you make them.

Whether you're working with investments, cash flow, inventory, cost estimates, budgets, plans- nearly anything numerical, the VisiCalc program can help you work better, smarter, faster.

And while the VisiCalc program does a lot by itself, it can do even more for you when used with other Visi programs. For example, transfer your data to our VisiTrend/Plot program for forecasting, statistics, charts and graphs.

Ask your retail computer store salesperson for a demonstration of the VisiCalc program. See how easy it is to take the work out of working with numbers.

**Step One:** A blank worksheet.

Your VisiCalc worksheet is ready for virtually any number problem you have in any form you need, and it can handle as many problems as you want- just store one worksheet and start the next.

**Step Two:** Type in your problem.

VisiCalc's row and column format is simple to use. Simple and advanced math, plus business formulas are built in. An on screen editor allows you to rearrange numbers, words and formulas to fit your required printout.

### Step Three: Play "What if...?"

Once your problem is on the worksheet, use VisiCalc's powerful Recalculation feature to analyze it. Change one number anywhere on your worksheet and instantly see the results. Sensitivity analysis, projections, estimates and hundreds of other decisions become clearer, more easily understood.

#### VisiCalc features:

- Wall sized worksheet 63 columns wide and 254 lines deep; usable space depends upon the computer's RAM memory size.
- Powerful Recalculation feature lets you change any number or formula and immediately all numbers affected by that change are recalculated and displayed.
- Replicate feature duplicates any entry- label, number or formula- anywhere else on the worksheet without you having to retype it over and over.
- Window feature splits the display into two parts or "windows", either horizontally or vertically, to view separate portions of the worksheet.
- Variable format sets any or every number to integer, general, dollars and cents, left or right justified, or histogram (simple graph) with just three keystrokes.
- Now with expanded commands and functions, including the Choose function, logical functions (True, False, And, Or, Not, If) and arithmetic comparison operators (>, <, =, >=, <=, <>). Apple II and IBM only.
- Automatically interchanges data with the VisiTrend/Plot, VisiPlot, VisiFile, and VisiTerm programs, and accepts data from the VisiSchedule and Desktop/Plan II programs. Apple II only.
- Automatically performs simple math functions (+, -, x, /) and built in functions (Sum, Average, Net Present Value, Count, Minimum, Maximum).
- Engineering math functions include a full set of trigonometric functions; scientific notation is automatic, eleven digit precision is standard.
- Prints full worksheets as well as lists of worksheet formats and formulas.

**PRICE: \$250.00**

#### **TITLE: VISISCHEDULE**

**PUBLISHERS NAME: VISICORP**

**HARDWARE REQUIREMENTS: printer**

**DESCRIPTION:** It makes short work of scheduling projects and estimating costs.

The VisiSchedule program is a powerful project planner that gives you both the overview and the details you need to control projects, meet deadlines, level resources, and beat cost targets. It instantly shows you skill levels, costs and the critical path among your project's tasks. It allocates all costs, specifies earliest and latest start dates, slack times, holidays, prerequisites and deadlines for each task.

The VisiSchedule program also produces comprehensive summaries, calendar time charts, milestone and other reports.

The speed, versatility and interactive display of the VisiSchedule program make it easy to develop your project as you enter data, and to investigate trade-offs between manpower, costs, and time. You can ask "what if?"...add, move, slip or change any task, skill level or cost, and the program instantly displays the impact. This feature also makes it a snap to keep schedules and costs current.

Another important benefit is the ease of transferring data to VisiCorp's other Visi programs. For example, transfer your project's cost data to our VisiTrend/Plot program to analyze the data and plot the results.

Ask your retail computer store salesperson for a demonstration of the VisiSchedule program. You'll see how easy it is to make short work of planning and budgeting projects.

**VISISCHEDULE FEATURES:**

- \* Automatically calculates and displays the critical path, identifying tasks that cannot be delayed without affecting the entire project.
- \* Easy to learn - User Guidance System leads you step-by-step from start to finish, easy to use - fewest possible keystrokes required.
- \* Interactive display instantly shows the impact of new data or changes in data, allowing you to ask "What if?" and investigate trade-offs.
- \* Calculates, displays and prints out nine skill categories and their costs per task, total manpower and direct costs, manpower levels, and the start, completion and deadline dates for each task.
- \* Allocates up to nine skill and cost categories per task, and automatically adjusts the project schedule to level those resources.
- \* Slip any task and all dependent future tasks are automatically adjusted. In addition, an entire project can also be automatically aligned to a different date.
- \* Comprehensive reports displayed or printed out on your entire project or any part of it sorted in the order you need.

**SPECIFICATIONS:**

- \* Entire project is contained on single disk.
  - \* Task per project: 160 with Language System or RAM Card (64K); 50 without Language System or RAM Card (48K).
  - \* Time units: day or weeks.
  - \* Holidays: up to 24 days plus 24 weeks off when using day units, up to 24 weeks off when using week units.
  - \* Task prerequisites: up to nine per task.
  - \* Skill categories and costs: up to nine per task.
  - \* Task duration: up to 999 time units.
  - \* Costs: whole, thousand or million currency units.
  - \* Printed report width: 79 to 160 characters.
- PRICE: \$300.00**

**TITLE: VISITREND VISIPILOT**

**PUBLISHERS NAME: VISICORP**

**DESCRIPTION:** VisiTrend/VisiPlot responds to the demanding needs of the sophisticated manager, planner, investor, analyst, statistician, consultant. You'll be able to accomplish more because you decide on your time series analysis, and VisiTrend/VisiPlot performs it for you. So you can spend your time examining various alternatives, not figuring them out. You can perform regressions on data series to look for relationships. Make transformations on the data like lags, leads, percent change, moving averages and exponential smoothing. Or write arbitrary formulas to calculate new series based on several existing ones. With one simple command, you can get descriptive statistics on any data series including mean, variance, standard deviation, minimum and maximum. And with these programs' powerful graphics capability, you'll be able to easily produce charts and graphs that make it so much easier to see how one series relates to another. You get everything VisiPlot provides: line charts, area charts, bar charts, high-low graphs, scatter graphs, and pie charts, too. And you don't need to know any computer programming to put VisiTrend/VisiPlot to work for you. A simple "menu" selection helps you through entering your data, modifying it, displaying it as a chart or graph, or calculating new series from other series.

You can save all your time series data, charts and graphs for future display, or print them out on your system's printer for reports and proposals.

**PRICE:**



## GENERAL ACCOUNTING

### **TITLE: ACCOUNT KEEPER**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Account Keeper is a simple, yet efficient, small business accounting system. One simple typed-in entry posts accounts for later examination and reporting by month, by account and as a summary of activity to date. The system delivers a trial balance, monthly detailed reports and a complete check register. You can also find your current bank balance instantly. The flexibility of this system is symbolized by its easy to modify chart of accounts. You can use our chart of accounts or tell the system once what you want and it will remember your system. Complete audit detail is available including memo records for corrections or anything outside the usual. You can set up the system to monitor a business with departments, divisions or profit centers.

**PRICE: \$119.95**

### **TITLE: ACCOUNTANT/COMPLETE ACCOUNTING SYSTEM**

**PUBLISHERS NAME: INSOFT CORP.**

**DESCRIPTION:** Designed for CPA's and small to medium-sized businesses. A comprehensive accounting system consisting of General Ledger, Accounts Receivable, Accounts Payable and Payroll. Each part will automatically post to the General Ledger or may be used independently as a complete package with its own instruction manual, sample data and start-up aids to ensure easy implementation.

**GENERAL LEDGER:** Capable of continuous year-to-date balances and prior year comparisons. Provides easily accessible records of all important financial transactions in your company. This includes the familiar balance sheet, as well as departmental and summary income statements, cash receipts and disbursement journals, and a complete transaction register and trial balance for audit trail purposes.

**ACCOUNTS RECEIVABLE:** You know how important it is to maintain constant watch on customer activity. It not only prints your invoices but also assembles the information into appropriate monthly statements for each customer. With this same data, the system creates both detail and summary aging reports for quick location of any overdue accounts. Also, customer activity reports may be viewed on the screen or printed for permanent record.

**ACCOUNTS PAYABLE:** Maintains a complete vendor file with a record of all purchase orders and available discounts. A comprehensive transactions register is always ready for your convenience. In addition, the system produces an aged payable report, prints your checks and check register and prepares an extremely useful cash requirements report.

**PAYROLL:** No matter how varied your employees may be, whether hourly, weekly, monthly, or commissioned, the Payroll system will compute and print their checks. While it prepares them, it also processes city, state and federal taxes as well as user defined deductions. Complete monthly summary reports are available for each department in your company. Finally, this system prepares W2's, quarterly reports and features user modifiable tax tables for any year.

**PRICE: \$365.00**

### **TITLE: ACCOUNTS RECEIVABLES/PAYABLE**

**PUBLISHERS NAME: BUSINESS MASTER**

**DESCRIPTION:** A fully functional accounting tool written with the

small business or home finance account in mind. Both the housewife and the professional businessman find it equally satisfying.

Runs with three disks the Businessmaster program disk and two data disks supplied by you. Facilitates up to 80 separate accounts. You must name your own accounts and designate your own account numbers. Each account has the capability of holding 100 entries and up to 700 total entries per 3.3 DOS data disk. A new data disk may be started at any time and balances brought forward. A standard practice is one data disk per month.

Balances may be obtained at any time. Press one button and all the balances from asset totals to net gain will appear on your monitor for easy access. The balance total may be as large as \$10,000,000. Each individual entry can be up to \$100,000.

The EDIT feature will allow you to correct your entries at any time. With the Edit command you can add in a forgotten entry or you can change an existing entry. The program also includes a trap to save you from closing an account with an unposted balance.

Will relay instantly if a recent payment has been made on an account. If an account has not had a debit entry within the previous 30 days, the account will be labeled PAST DUE. A special flagging system, also included, allows you to mark specific accounts for reasons of your own.

PRICE: \$79.95

**TITLE: APPLE CHAMP**

**PUBLISHERS NAME: NIBBLE**

DESCRIPTION: (Checkbook Advanced Management Program) A versatile data entry and checkbook reconciliation system. Allows for record Addition, Editing, Search/Change, Posting, and Bank Reconciliation. Maintains automatic running bank balances and facilitates monthly checkbook balancing.

PRICE: \$28.95

**TITLE: APPLE TRAC**

**PUBLISHERS NAME: NIBBLE**

DESCRIPTION: An easy-to-use, adaptable system for analyzing "Where Your Money Goes." TRAC accepts information about your credit cards, checks, and cash transactions and prints more than 10 different reports for Budget/Spending Analysis. Versions included on the disk are: Serial Printer, Parallel Printer, and Screen Only.

PRICE: \$24.95

**TITLE: ASSET MANAGER**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

DESCRIPTION: Designed to keep track of your capital items, figure their depreciation and calculate your investment tax credits. With this system, you will have details on your inventory of capital equipment and be able to search and find data needed for tax preparation and tax audits should they be necessary. Allow easy entry of items on the books now and detailed analysis of items you add in the future.

PRICE: \$39.95

**TITLE: BUSICOMP**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

DESCRIPTION: A completely integrated, interactive business system designed to handle the accounting needs of small businesses.

Six levels of security open up the 11 program sections which cover accounting functions, including accounts receivable, accounts payable, inventory control, general ledger, fixed assets and payroll. All sections are interactive, allowing simplified, time saving single-step entry.

Incorporates and error trapping, menu driven, self prompting design which enables the user to begin using the program with limited training.

Among the 41 reports generated; are aging and data on receivables and payables, personnel, payroll, inventory, expenses, revenue, and journal posting. Formats are designed to correspond to standard DSF Forms available nationwide.

**PRICE: \$1500.00**

**TITLE: BUSINESS ACCOUNTING PACKAGE**

**PUBLISHERS NAME: GEORGE OTIS COMPANIES**

**DESCRIPTION:** A versatile, easy to use, accounting system designed for the first time computer user. the system follows standard accounting practices and requires a very minimal knowledge of accounting. Designed to be as fool proof as possible, the System incorporates many different error checking routines which makes it just about impossible to foul up.

Being completely menu driven and screen prompted makes the system easy to use with little need for questions. Also each module is designed to operate in the same basic format with a large amount of standardizing so the user can go from module to module without having to learn the system over again.

As an interactive system, it totally eliminates having to make double entries. For instance, when an invoice is generated to a customer from ORDER PROCESSING for an INVENTORY ITEM, the system will update the INVENTORY FILE for that item. It will also issue a BACK ORDER if out of stock, and then update the RECEIVABLES CUSTOMER FILE accordingly. If the INVENTORY ITEM has a commission built in, it will update PAYROLL and the SYSTEM posts all to the GENERAL LEDGER automatically.

High speed data input routines are evident in all modules. This is the fastest method of inputting data in existence today.

The package uses the INDEX programming system, meaning that you have the fastest method of accessing records known today. A MASTER INDEX disk records the location of all records on as many disks as you have in your system, no matter how many.

This unique file Management System means you can store more data in less space...and recall your file data faster.

You no longer have to initialize disks. The system does it for you automatically. INCLUDES:

- \* ORDER PROCESSING

- \* FIXED ASSETS

- \* GENERAL LEDGER

- \* DISBURSEMENTS

- \* ACCOUNTS RECEIVABLE

- \* ACCOUNTS PAYABLE

**PRICE: \$1650.00; disk**

**\$2000.00; Corvus Version**

**TITLE: BUSINESS SOFTWARE SERIES**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION: MICROACCOUNTANT:** Records and produces reports on account balances, general ledger journals, revenue and expenses. Screen or 40 column printer reports. Handles up to 500 journal entries per period, up to 100 accounts. Instructions include a short primer in financial Accounting.

**UNIVERSAL BUSINESS MACHINE:** Designed to SIMPLIFY and SAVE TIME



for the serious businessman who must periodically Analyze, Plan and Estimate. The program was created using our Universal Computing Machine and it is programmed to provide the following planning and forecasting tools.

**\* CASH FLOW ANALYSIS**

- \* PROFORMA PROFIT & LOSS**
- \* PROFORMA BALANCE SHEET**
- \* SALES FORECASTER**
- \* SOURCE AND USE OF FUNDS**
- \* JOB COST ESTIMATOR**

**INVOICE:** Use the ELECTRONIC INVOICE facsimile displayed on your CRT. The program prompts and you fill in the data. Includes 3 address fields (yours, Bill to and Ship to), invoice No., Account No., Order No., Salesman, Terms, Ship Code, FOB Pt and date. Up to 10 items per sheet with these descriptions: Item No., No. of units, Unit Price, Product Code, Product Description, Total Dollar amount per item and invoice total dollar amount. Generates, at your option, hard copy invoices, shipping memos, mailing labels, audit copies, and disk updates to master A/R files.

**BUSINESS CHECK REGISTER:** Expedited version of the Checkbook II program. Handles up to 500 checks per month with complete record keeping.

**BUSINESS BUDGET:** As described above and companion programs to Business Check Register. Handles 500 transactions per month, up to 20 cost categories. Accesses BCR files for actual costs.

**PRICE: \$89.95; Universal Business Machine**

**\$49.95; Microaccountant**

**\$49.95; Invoice**

**\$29.95; Business Check Register**

**\$29.95; Business Budget**

**\$199.95; Entire Package**

**TITLE: CLIENT RECORDS/BILL PREPARATION**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** A software package that will let your Apple computer keep fast and accurate records. Plus, it has the capability of preparing your monthly bills.

Allows you to record client name, address, phone number, zip code and four descriptive comments which can be used for job descriptions, client contacts or any other information. This software can be modified to fit your individual business.

The bill preparation function automatically totals up all charges that have been added to a client's file since the last billing was prepared and lists those charges, in detail, on the new billing invoice.

The printer routines can easily be changed to accommodate any paper size.

**PRICE: \$49.95**

**TITLE: CONJOB**

**PUBLISHERS NAME: COMPUTERIZED CONSTRUCTION MANAGEMENT SYSTEMS**

**DESCRIPTION:** This is a perfect job cost accounting program designed by a contractor for contractor's, though the program is versatile to other applications. The program breaks any job down into user specified phases. Each phase is a portion of the total job to be done. Within each phase up to 45 line items can be specified for exact task breakdown. Once the report set is defined then the computer asks for line item budgets. During the job completion the actual costs are entered. The resulting printout compares line items, phases and total job budgets to actuals in two ways, by percent and by dollar variances. A cover



page is printed which is a summary of all phases which adds percent of budget to the percent complete and dollar variance columns. CONJOB makes it easy to see where a particular line item, phase or job has gone over or under budget at a glance. Also reveals upcoming budgeted costs for cash flow. Comes user friendly with on screen "how to" instructions. No restrictions as to number of jobs. Dealer demo's upon request.  
**PRICE: \$195.00**

**TITLE: CONSTRUCTION BOOKKEEPER**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS: Two disk drives and 130 column printer**

**DESCRIPTION:** The Construction Bookkeeper is designed specifically for the General Contractor of larger sub-contractor who needs to computerize his construction business. The program comes complete with a general ledger element, a job cost and project management system and a full feature subcontractor control system. It also includes an extensive payroll system that posts all costs to the jobs and the general ledger accounts.

A special document processor aids the secretarial staff in keeping accurate reports of all the contractor's jobs. The system also provides trial balance reports, monthly balance sheets, income statements, and an individual job cost for each job in progress. The system prints all payroll checks and monthly, quarterly and annual payroll reports.

**PRICE: \$795.00**

**\$50.00 for manuals**

**TITLE: COST ACCOUNTANT**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS: Two disk drives and 130 column printer**

**DESCRIPTION:** The Cost Accountant is capable of managing 200 active jobs at a time. The program is designed to aid professionals such as engineers, architects, consultants, custom manufacturers, and building subcontractors with their job cost accounting needs. The program's payroll system contains all reporting elements to meet most state and federal regulations.

A report element is included which allows the professional and clerical staff to keep accurate reports on every job. The system makes it easy to prepare trial balance reports, balance sheets and full income statements.

**PRICE: \$459.95**

**\$ 50.00 manuals (may be purchased separately)**

**TITLE: FINANCIAL PARTNER**

**PUBLISHERS NAME: THE DENVER SOFTWARE CO.**

**DESCRIPTION:** A one-or two-drive accounting system specifically for the household budget manager or small business with a gross yearly income of up to \$1,000,000.

It teaches you simple accounting. All the necessary "how-to" is detailed in a well-written reference manual which has uncomplicated accounting instructions.

**PAYABLE ITEMS (Accounts Payable)**

Vendors allows additions to a file of up to 75 vendors (creditors) with whom you do business. It also permits the user to retain detail, or keep a record of all purchases, payments, and finance charges on credit accounts.

Purchases automatically updates the Financial Ledger (General Ledger) and allows entry of three types of transactions to the vendor listing:

\* recurring purchases, such as rent or car payments;

- \* regular purchases, such as supplies or clothing;
- \* finance charges or credit accounts.

Payments enables the user to pay vendors, record payment transactions, and update the Financial Ledger. this includes an automatic payment selection. along with check-printing capabilities. In addition, the Payments function accommodates cash payments.

Detail Removal allows comparison of records stored in the Financial Partner with credit account statements, monitoring of all transactions, and removal of any retained detail no longer needed.

CASH RECEIPTS (Accounts Receivable)

A scaled-down Accounts Receivable which records transactions against the Financial Ledger for all income.

FINANCIAL LEDGER (General Ledger)

Chart of Accounts is listed by account number and description, and is grouped according to assets, liabilities, equity, earned income, cost of earned income, and expense.

Journal Entries are those transactions, other than Cash Receipts and Payable Items, which are used to make adjustments to the Financial Ledger.

Detail Trial Balance may be run at any time to print all transactions for the period by account number.

Income Statement, also known as the Profit and Loss Statement, details revenues and expenses over a specific period of time (week, month, year, and so on).

Balance Sheet is used to present a financial status at a given period in time.

Period-to-Date Register prints all transactions by batch and entry source.

Closing is the process that ends your business cycle. It is used to close the period and also the year. (Each accounting period can be as long as your business requires- for example, a week, a month, a quarter, ten days.)

**PRICE: \$245.00**

## **TITLE: GENERAL ACCOUNTING SYSTEM**

**PUBLISHERS NAME: BPI SOLUTIONS, INC.**

**DESCRIPTION:** For Small Business Accounting

**GENERAL LEDGER SYSTEM**

Balance Sheet, Profit & Loss Statement, Cash Disbursements Journal (Check Register), Sales Journal (Invoice Register), Cash Receipts Journal, Merchandise Purchased Journal, Cash Sales Journal, General Journal, Accounts Receivable Ledger, Accounts Payable Ledger, Payroll Ledger.

**ACCOUNTS RECEIVABLE SYSTEM**

Open Item or Balance Forward, Complete Account Aging, Life-to-Date Customer History, Complete Account Analysis (Up to 16 Reports), Itemized Statement Printing, Customer Mailing List Generation, 500 Prompted Customers per Diskette (No limit to number of diskettes) 1000 Transactions per Period, Skeleton General Ledger Prepared, Automatic Posting to BPI General Ledger.

**INVENTORY/ORDER ENTRY**

FIFO, LIFO, Averaging, 900-2000 Line Items, Instant Inventory Query, Automatic Back-Order Handling, Automatic Re-order Levels, Inventory Turn Analysis, Point-of-Sale Operation, Price Tag Printing, Inventory Profit & Loss Statement, Purchase Order Generation, Non-Inventory Item Handling, Always in Balance with General Ledger, Automatic Posting to Regular BPI Ledger.

It was designed by BUSINESS and ACCOUNTING PROFESSIONALS - not programmers.

It lets a business run the way it DOES - not the way a group of programmers THINKS it should.

**Features:**

Chart of Accounts - over 500.

Up to Ten separate profit centers, each with a complete set of financial statements - PLUS a set of consolidated statements.

Accounts Payable - over 200 Prompted payees.

Accounts Receivable - over 500 PROMPTED customers per diskette. 1000 transactions per period. Up to 16 REPORTS for ACCOUNT ANALYSIS.

Inventory - from 900 to 2000 line items.

All sections may be used independently.

**PRICE:****TITLE: INCOMPLETE RECORDS ACCOUNTING SYSTEM**

**PUBLISHERS NAME: PADMEDE COMPUTER SERVICES**

**DESCRIPTION:**

\* Control in your office

\* Trial Balance, Profit and Loss

\* Batch Control Techniques are optional on input

\* Selective Reporting by Nominal Codes and Final Accounts is available

\* Complete Audit Trail

\* 900 Nominal Codes

\* 99 Sub-Analysis Codes

\* 2000 Posting per disk

\* Comparatives

\* Automatic V.A.T. calculation from Gross Amount

\* Nominal Ledger Listing

\* Full interrogation via screen

\* This system can also be used as a Nominal Ledger System taking input from Sales and Purchase Ledgers

\* Comprehensive verification of input

**PRICE:****TITLE: PERFORMANCE MANAGER**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** A series of VisiCalc files and Auto Executing VisiCalc programs oriented toward a manager who wants an easy, time-saving method to analyze monthly data in relation to goals and historical data. It can be used on almost any kind of monthly data in relation to goals and historical data. It can be used on almost any kind of monthly performance data, including:

\* Performance levels (dollars, points, sales calls, or orders taken, etc.) for each salesperson, department, product, or day, etc.

\* Income or Expense for each budget category, department, store, or division, etc.

\* Production level for each employee, department, or product, etc. The Performance Manager will analyze monthly performance against Budget, Same Month Last Year, and 12 Month Moving Average. It will also compare YTD Actual Performance against Budget and Previous Year. Both the Quantity and Percentage Variances are shown.

Both a 48K and 64K version are provided on one disk. The 48K version will handle any 10 items; goals and budgets can be shown on one screen. The 64K version will handle 23.

Because of the automatic execution features, only a small amount of data needs to be entered for complete reports. A typical session of data entry takes fifteen minutes or less; printout is immediate. Beginning of the year processing typically involves:

\* clearing previous budget, goals and YTD (single command)

\* setting current year goals or plan

Monthly processing involves:

\* clearing the screen for input (single command)  
\* entering current month data  
\* running update routine that does all calculations (single command)  
\* printing reports and saving to disk  
Comes with full documentation describing its use, along with a number of example applications. The documentation includes all source code as well as tips on how to modify the code for custom applications (for Versacalc programmers).  
**PRICE:**

**TITLE: PURCHASE LEDGER SYSTEM**

**PUBLISHERS NAME: PADMEDE COMPUTER SERVICES**

**DESCRIPTION:** 900 Accounts; 4000 Transactions (Posting) per month; 900 Nominal Ledger Codes available; Account is updated immediately when posting is made; Balance Brought Forward Purchase Ledger; Full interrogation via screen; comprehensive verification of input.

**REPORTS:**

Remittance Advice; Daybook Listing; V.A.T. Summary; Summary of Totals for Nominal Ledger; Purchase Ledger Listing; Transaction Listing

**PRICE:**

**TITLE: SALES LEDGER SYSTEM**

**PUBLISHERS NAME: PADMEDE COMPUTER SERVICES**

**DESCRIPTION:** 900 Accounts; 4500 Transactions (Postings) per month; Account is updated immediately posting is made; Balance Brought Forward Sales Ledger; Cash Allocation facility to Aged Debts; full interrogation via screen; Comprehensive verification of input.

**REPORTS:**

Statements; Daybook Listing; V.A.T. Summary; Summary of Totals for Nominal Ledger; Aged Debtors; Transaction Listing; Non-buying Customers; Representatives Report; Sales Ledgers.

**PRICE:**

**TITLE: SMALL BUSINESS SOFTWARE**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** MICROLEDGER- General Ledger, Chart of accounts, journal, Trial balance, posting, audit trail of transactions. Profit and loss statement. Balance sheet.

MICROPAY- Accounts payable, statements by vendor and by date. Cash requirements. Prints check and mailing stub. Journalizes A/P transactions into MICROLEDGER.

MICROREC- Accounts receivable. Aged Trial balances, prints invoice, Statements by customer and by date. Cash Projections, Journalizes A/R transactions into MICROLEDGER.

MICROPERS- Payroll/Personnel system. Payroll Register for salaried, hourly staff. Prints check and 941, W-2 form, Personnel History, Payroll journalized into MICROLEDGER.

MICROINV- Inventory control. Stock status report, Audit trail of receipts & issues. YTD usage, average and LIFO costs, economic order quantities. Job costing. Inventory transactions are journalized into MICROLEDGER.

**PRICE: \$720.00**

**TITLE: SYSTEMS II EX**

**PUBLISHERS NAME: WESTWARE SOFTWARE, INC.**

**HARDWARE REQUIREMENTS:** Two disk drives, 132 column printer

**BUS-40**



**DESCRIPTION:** SYSTEMS II EX is a fully integrated accounting system with Chart of Accounts, Inventory, Vendor File, Customer File, Accounts Payable, Accounts Receivable, General Ledger & General Journal, Payroll & Database. Job Costing & Cycle Billing are optional modules and are interactive with the system. Most of the modules are available as standalones or configured in various combinations to the needs of the user.

The system uses a KSAM firmware card (Keyed Sequential Access Method) that plugs into a slot in the APPLE that permits high speed searches on the key field. It also eliminates sorts after entry as all records are sorted upon entry.

Another unique feature the KSAM card provides is protection against unlicensed use of the system. The software is programmed to a particular KSAM card serial number. The system looks for that particular card number before it will operate correctly. Because of this feature, back-up copies of the programs can be made. The KSAM card is included as a part of the system.

The KSAM card maintains all files in ascending order on the first field in every file. Two-second access is guaranteed for any record accessed on the first field for the 5 1/4" System. Slightly longer access time may be experienced on the Corvus system, due to the number of the files to be accessed.

<b>PRICE: Entire System.....</b>	<b>\$1495.00</b>
<b>Inventory.....</b>	<b>\$1000.00</b>
<b>Customer File.....</b>	<b>\$400.00</b>
<b>Vendor File.....</b>	<b>\$400.00</b>
<b>Accounts Receivable Open Invoices.....</b>	<b>\$400.00</b>
<b>Accounts Payable Open Invoices.....</b>	<b>\$400.00</b>
<b>Employees.....</b>	<b>\$100.00</b>
<b>Account Numbers.....</b>	<b>\$250.00</b>

#### **TITLE: THE ANALYZER**

#### **PUBLISHERS NAME: DAKIN 5 CORPORATION**

**DESCRIPTION:** You've automated your business with The Controller. The Analyzer carries on the tradition of providing you with more business information at a minimal cost of time and effort.

Whether you purchased your Controller and Apple (TM) computer last week or last year, when you run all your reports and close this month, will you spend a considerable amount of time analyzing all the data you receive from General Ledger, Accounts Receivable and Accounts Payable?

The Analyzer provides immediate answers to such essential questions as: How effectively are my resources being used? What is my estimated cash flow for the next four months? How does my Profit and Loss for this quarter compare with the same quarter last year?, and What percentage of all my assets does my inventory represent in comparison with last year at this time?

The Balance Sheet Analysis Report, using the total assets of your company as the base, presents you with two different types of reports. One type shows the dollar variance of this year with last year. The other type indicates the percentages of your company's individual assets, liabilities and equities for the two years as compared to its total assets.

Depending upon the option you chose, you will be provided with this year and last year's comparative figures for the current month, current quarter, and year-to-date.

The Profit and Loss Analysis Report, with revenue as its base, also supplies you with dollar variance and percentage reports. One option even permits departmentalized reporting. You are shown two year comparative data for the current month, current quarter, and year-to-date.

The Budget Analysis Report shows in the current month, year-to-date, and future months your projected budgeting figures, the

actual figures, and the degree of variation. You may also print this report by departments.

The Sources and Applications of Funds Report reconstructs in summary form the transactions that cause the balance sheet changes from the past year to the present.

The Financial Ratio Analysis Report provides a measure of your ability to meet short term obligations, the extent to which your company is financed by debt, management's overall effectiveness, and determines how effectively your resources are being used.

The Cash Flow Projection Report furnishes you with the information required to adequately plan a cash budget. This includes at the end of each month, and for four future months, a projection of your cash surplus.

The above programs (and all others in The Analyzer) are selected from menus, as in The Controller. You'll find that you experience no period of adjustment even the very first time you use The Analyzer with The Controller.

**PRICE: \$625.00**

**TITLE: THE B.O.S.S.**

**PUBLISHERS NAME: SENTIENT SOFTWARE**

**DESCRIPTION:** A fully integrated job cost accounting system with A/P, A/R, Payroll, G/L and the ability to generate numerous job cost reports. The ideal accounting system for construction contractors or other job oriented service businesses. The B.O.S.S. can handle: 175 general ledger accts., 100 employees, 150 vendors, 90 jobs per year, 50 automatic cash disbursements and 50 automatic general journal entries.

**Features include:**

- \* Automatic journal entries and automatic cash disbursements
- \* 30 Cost accounts with 20 subaccounts per cost account
- \* Full editing capability during input
- \* Extensive error checking during input
- \* Prints checks, invoices, numerous
- \* A/P invoice tracking
- \* Complete reports including- income statements, contract and job status, user defined job cost reports and labor reports, balance sheets.

**PRICE: \$2000.00**

**TITLE: THE CONTROLLER**

**PUBLISHERS NAME: DAKIN 5 CORPORATION**

**DESCRIPTION:** An automated business system for small business firms, and includes General Ledger, Accounts Receivable, and Accounts Payable.

For small business firms that gross approximately one million dollars a year or less, have no more than 125 vendors per month, and do not exceed 1000 entries to the General Ledger a month, The Controller may very well suit your business needs.

In addition to normal business processing, The Controller prints over 25 reports for your convenience, easy reference, and audit trails.

**General Ledger:**

Shows that the total debits equal the total credits, and prints a detailed list of all your journal entries for the month for you to verify before processing your final Balance Sheet. You have a choice of printing this report in either a summary or detailed form. Indicates the health of your business at any particular given time, illustrating the relationship between assets, liabilities and equity. You have the option of printing either a summary or detail Balance Sheet report.

The Income Statement, often called the Profit and Loss (P & L)

statement shows the revenue and expenses of your company during the current month and year-to-date. For either the summary or detail report, you can also have the reports printed by department if your business is departmentalized.

**Accounts Receivable:**

Shows a register for a batch of invoices, adjustments or finance charges entered.

The Payment Journal reports payments and adjustments made to a customer's balance.

The Aged Trial Balance appears in a detail and summary form.

The detail report provides a complete analysis of each customer with a balance.

Computer printed statements are generated every month to send to your customers.

**Accounts Payable:**

Is a register of all checks printed and posted.

The A/P Distribution Journal details the distribution of all dollar amounts to the respective General Ledger accounts.

The A/P Disbursement Journal details which checks have been written, to whom, the check date/number/amount and the discount amount. The summary section details the amounts to the G/L accounts.

**PRICE:**

**TITLE: THE CONTROLLER (GBSI)**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** The Controller gives a business control of its revenues and expenses through General Ledger, Accounts Payable, and Accounts Receivable computer software. The Controller is designed for a non-technical manager or clerk. It handles accurate bookkeeping and can easily maintain the ledger, customer, and vendor accounts of many small businesses. The Controller provides better control of cash flow, reduces paperwork, eliminates last-minute "catch-up" accounting, prints checks and monthly account statements, and provides information in concise summary reports that allow a manager to make better decisions. The Controller has been designed with fail safe operation in mind. Its unique data entry system signal typing errors with an audible warning. It automatically makes copies of data files for historical purposes, in case of loss of the originals. And it automatically prints reports before the system will allow the user to close out the monthly books.

The Controller Business System consists of three program modules: The GENERAL LEDGER module maintains a file of up to 250 types of journal accounts with up to \$90 million in any one account. Up to 7500 journal entries can be made per month, and a unique feature allows customer and vendor account transactions to be created and posted to the general ledger automatically, without redundant typing. The system produces detailed, easy to read management summaries of journal accounts, revenues, and expenses; as well as balance sheets and income statements.

The ACCOUNTS RECEIVABLE module maintains up to 250 customer files per data diskette (up to 3 diskettes can be used). Each diskette can handle 750 sale and payment transactions per month, and the balance-forward system automatically summarizes transactions into account aging periods at month end. Individual transactions can be for up to \$90,000 each. The system produces a detailed summary of receivables, organized by the number of days each bill has been outstanding (aged trial balance). Monthly account statements are printed automatically for customer billing purposes, with optional finance charges added to overdue accounts. The system also produces mailing labels, customer lists, and sales commission reports by salesmen.



The ACCOUNTS PAYABLE module maintains a file of 100 vendors and allows 300 invoices for up to \$1 million each, or \$90 million cumulative. Payables are organized by due date, so that in planning cash flow a business can customize bill paying to take advantage of discounts and varying net terms. Checks are printed automatically, along with summaries of case requirements by due date and vendor. The system prints summaries of check paid, new accounts, and a list of vendors.

THE CONTROLLER is packaged in an attractive 3-ring binder with a manual and diskettes.

PRICE: \$625.00

**TITLE: THE UNIVERSAL COMPUTING MACHINE**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** User defines row and column names and equations forming a unique computing machine. Table elements can be multiplied, divided, subtracted or added to any other element. User can define repeated functions common to a row or column greatly simplifying table setup. Hundreds of unique computing machine can be defined, used, stored and recalled, with or without old data, for later use. Excellent for sales forecasts, engineering design analysis, budgets, inventory lists, income statements, production planning, project cost estimates - in short for any planning, analysis or reporting problem that can be solved with a table. Unique cursor commands allow you to move to any element, change its value and immediately see the effect on other table values. Entire table can be printed by machine pages (user-defined 3-5 columns) on a 40 column printer.

PRICE: \$49.95

**TITLE: THINKER**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** Consists of 6 comprehensive interactive modules, with all transactions applied immediately and the results are instantaneously accessible. They are: Accounts Receivable, Accounts Payable, Sales Order Entry, Purchase Order Entry, Inventory Control, Mailing List.

PRICE: \$495.00



## GENERAL LEDGER

### TITLE: ABACUS

PUBLISHERS NAME: SENTIENT SOFTWARE

DESCRIPTION: Complete General Ledger accounting system with Accounts Receivable and Accounts Payable modules available. 255 General Ledger accounts. Easy to use, menu driven for fast access to all bookkeeping functions. Includes the ability to handle automatic journal entries and automatic cash disbursements, this package contains features usually found on much larger systems. The perfect General Ledger system for bookkeepers of small and medium sized businesses.

#### PRICE:

General Ledger - \$375.00

Accounts Receivable \$250.00

Accounts Payable - \$250.00

### TITLE: ACCOUNTING PLUS II

PUBLISHERS NAME: SYSTEMS PLUS

HARDWARE REQUIREMENTS: 2 disk drives, 80 or 132 column printer

DESCRIPTION: GENERAL LEDGER

#### FEATURES

Produces Financial Statements

Provides Journal Entry capability with computer assisted screen forms to eliminate out-of-balance entries and redundant key strokes.

Maintains complete auditability of all General Ledger Accounts by forcing all erroneous journal entries to be corrected by adjustment entries rather than editing of accounts.

Produces Journal Report for all transactions entered, sorted in date sequence.

Produces a report in ledger format of specific accounts or all accounts.

Produces a detail Trial Balance.

Maintains Chart of Accounts Description File.

Maintains up to 500 user defined chart of accounts.

Produces a detail and summary Trial Balance Reports, with flexibility of chart of accounts numbering.

Generates account activity reports for a single account(s).

#### REPORTS

Chart of accounts- This report lists all active General Ledger accounts on the file in account number sequence. Account descriptions as well as account numbers and account types are displayed.

Income statement- This report lists all Income accounts and displays Income and Expenses for both month to date and year to date accounts.

Balance sheet- This report lists all Asset, Liability and Equity accounts and their current balances.

Trial balance- This report lists the detail transactions that have been applied to each General Ledger account. The beginning account balance as well as debit and credit transactions and the present ending balance are listed for each account. Alternatively, a summary Trial Balance Report can be generated which list only the Beginning & Ending Balance for each account.

Detail journal- This report lists the detail transactions in date sequence. It provides an audit trail of all transactions that have been applied to the General Ledger. Transactions can be listed for all or specific modules.

Account activity report- This report lists all the activity regarding a specific account. It provides the capability of reviewing transactions such as cash disbursements, sales tax analysis, etc.

## INVENTORY

### FEATURES

Supports four different costing methods; Standard, Weighted Average, Lifo (Last in First out) and Fifo (First in First out). Maintains master parts list.

Offers 8-character alpha-numeric part identification and 100 product groups.

Prints Purchase Orders and maintains on order quantities.

Supports Inventory Transactions to allow for receipts, issues and adjustments.

Maintains a complete audit trail for all inventory transactions for the current month.

Provides eight Cost of Goods Sold Accounts.

Maintains usage history of all inventory items.

Provides method of taking a physical inventory.

Completely integrated with Accounting Plus II General Ledger System.

Allows for 1,000 inventory items per volume.

## ACCOUNTS RECEIVABLE

### FEATURES

Handles Open Item Accounts Receivable.

Maintains Customer Master File, accessed by a user definable Alpha numeric identification.

Automatically posts all Invoicing/Billing transactions to the General Ledger system.

Provides for Sales, Sales Tax, Cash Receipts, Discounts Given, Credits and miscellaneous Accounts Receivable Transactions and automatically posts these to General Ledger.

Provides Aged Accounts Receivable Report.

Provides Customer Statements.

Provides for up to 12 user defined notes that can be printed on invoices and statements.

maintains up to 300 customers.

Allows for invoicing on preprinted forms.

Allows for applying payments to oldest invoice in the customer file.

## ACCOUNTS PAYABLE

### FEATURES

Automatically posts invoices to Accounts Payable Account and allocated Expense Accounts in General Ledger.

Provides Cash Disbursement Controls at the individual invoice level.

Provides Open Accounts Payable Reports sorted by Vendor (Cash Requirements Report).

Prints Accounts Payable Checks and posts to the Cash and Accounts payable Account in General Ledger.

Allows for Handwritten Checks.

Provides Check Register for all payments.

Allows for partial payment of Vendor Invoices.

Enters and updates Vendor Invoices.

Maintains Vendor Master File, accessed by a user definable alpha numeric identification.

Maintains up to 300 vendors.

Allows for payment to oldest invoice.

### REPORTS

Vendor Listings lists all vendors on file in sequence by Vendor Identification Code.

Accounts Payable Aging ages all open accounts payable invoices by due date. It provides a ready reference to determining how old an invoice is and the discount amount which is still open. The aging periods are user selectable.

Open Accounts Payable List lists all invoices, Credit memos and Debit memos which are open on a Vendor. This report can be used for determining which Invoices should be paid and the discount

which should be taken.

Cash Requirements lists all invoices which are flagged for payment and determines both the discount which will be taken and the cash required for payment.

Checks. Preprinted checks are generated for each Vendor. A check stub is printed which lists each Invoice to be paid and any credits which have been applied.

Check Register lists all checks generated during check printing or hand check entry and lists the Invoices paid. All credits are also listed.

Accounts Payable Journal can be generated at any time by the General Ledger system. It lists a full account distribution of all Accounts Payable activity including Invoices, Credit memos and checks which have been entered into the system.

#### **SYSTEMS FEATURES**

Totally Integrated System.

Supports most 80 or 132 column printer through a special printer configuration program.

Totally menu driven with user prompting.

Displays disk utilization reports.

Easy to use.

Human engineered data entry display.

Reset protected to prevent loss of data.

Supports 2 or 3 disk drives.

**PRICE:**

#### **TITLE: ACCTS. PAYABLE/RECEIVABLE**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** Disk accounting system for business use. Generates and tracks purchase orders and invoices. Up to 500 active accounts.

**PRICE:\$175.00**

#### **TITLE: B.I.S. GENERAL LEDGER ON LINE**

**PUBLISHERS NAME: BRODERICK & ASSOCIATES**

**DESCRIPTION:** 8000 machine language instructions make B.I.S. a high speed instant posting and instant recall of account & entry information for immediate management decision making.

The entire ledger plus 3000 entries are binary packed on each information disk. When one information disk is full, another one is opened up (with no limit to the number of disks allowed).

Can handle 170 general ledger accounts, 3 profit centers per account, 521 account profit center combinations, 3000 daily entries allowed per disk, 1,000,000 or more annual entries allowed, all entries permanently saved, 15 user defined journals, 50 user defined account prompts, user defined entry activity codes, 40 split entries per transaction, entry posting is instantaneous, bi-directional sub-system interface, and many more options.

On line custom report generators provide user with complete flexibility for financial reporting. all reports are on line and begin printing instantly: BALANCE SHEET, PROFIT & LOSS, TRIAL BALANCE, CHART OF ACCOUNTS, GENERAL LEDGER AND ACCOUNT ANALYSIS, TRANSACTION ENTRY ANALYSIS and more.

**PRICE: \$195.00**

#### **TITLE: EZ-LEDGER**

**PUBLISHERS NAME: HIGHLANDS COMPUTER SERVICES**

**DESCRIPTION:** EZ-LEDGER is the ideal record keeping system for somebody running a small business out of their home or the self-employed professional. EZ-LEDGER uses the simplest form of

bookkeeping possible. Single entry bookkeeping requires only posting transactions either under INCOME or EXPENSE.

EZ-LEDGER will keep track of expense items under any one of 99 user selected tax codes plus keeping all year-to-date and monthly running totals for each of the selected items. Expense items may be entered under DEDUCTIBLE or NON-DEDUCTIBLE type codes.

EZ-LEDGER is a strictly cash system. i.e. if you pay out monies (check, cash, credit cards etc.) then the transaction is posted under EXPENSE and is you receive monies then record them under INCOME.

EZ-LEDGER will produce INVOICES with an automatically incremented invoice number and them automatically post the data to an ACCOUNTS RECEIVABLE 'holding' file or directly to INCOME and update all totals.

The accounts receivable and accounts payable files are 'holding' files with their own running year to date totals. Transactions in these files may be automatically posted to INCOME or EXPENSE and all respective totals will be updated automatically.

EZ-LEDGER will support 80 or 132 column printers and one or two disk drives. The printer is needed for producing invoices, but optional on all other reports.

PRICE: \$60.00

#### **TITLE: GENERAL LEDGER**

**PUBLISHERS NAME: SOLIDUS INTERNATIONAL CORP.**

**DESCRIPTION:** Along with the usual features such as account creation and maintenance this system allows users to customize their ledgers. The package will also provide the capability of calculating and reporting financial indicators such as debt to equity ratio and cash flow.

System specifications include user definable account numbers, cash or accrual accounting methods, separate departments if desired and a complete audit trail. Complete freedom for users to define their own output is provided, including balance sheets and income statements.

Comparative data by month, quarter and year are available for quick comparison to budget. Financial ratios regarding debt obligations, assets, liabilities, income and other factors are provided.

This package provides information for business regarding the financial health of the company. In particular, there is no longer any need to be an accountant to interpret your balance sheet. Interpretation of the results of the accounting system is carried out for you, for a quick look at the overall performance of your company.

PRICE:

#### **TITLE: GENERAL LEDGER**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** A complete accounting system with these features:

- \* Up to 500 accounts and 500 transactions per month.
- \* Extensive check register management system (similar to our PFM).
- \* Prints checks and mailing labels.
- \* Produces these report:
  - Transactions Journal
  - Account Ledgers
  - Income Statement
  - Balance Sheet
  - Account Listings

A user-friendly yet comprehensive double-entry accounting system employing screen oriented data input forms, extensive error-



trapping, data validation and machine language routines for high speed operation.

**PRICE: \$149.95**

**TITLE: GENERAL LEDGER**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** MICROLEDGER performs the duties of bookkeeping and the matching of revenues and expenses.

LEDGER 1 - builds and maintains your CHART OF ACCOUNTS Master file. This file also holds current and accumulated totals in each account.

LEDGER 2 - Sets up and updates JOURNAL Transaction file.

LEDGER 3 - Lists both JOURNAL and CHART OF ACCOUNTS files.

LEDGER 4 - Does TRIAL BALANCE and POSTING. It outputs and AUDIT TRAIL of all transactions.

LEDGER 5 - Produces PROFIT and LOSS STATEMENT

LEDGER 6 - Produces BALANCE SHEET Assets, Liabilities and owners equities are shown by account and by totals.

Aged Trial Balances (under 30 days, 31-60 days, 61-90 days, over 91 days).

Receivable by customer. You have the option to request report for a single customer or for all customers.

Receivables by date. In this program, you can ask for a statement covering a single date or a range of dates. The statements will also produce the corresponding cash projections.

Finally, the journalizing option will create the journal file entries that correspond to each A/R as it is entered, as well as to the receipt of each customer payment as it is input.

These transactions will ripple through your trial balance, posting, profit and loss statement and balance sheet.

**PRICE: \$140.00**

**TITLE: GENERAL LEDGER**

**PUBLISHERS NAME: BUSINESS MASTER**

**DESCRIPTION:** A fully functional accounting tool.

Runs with two disks- the Businessmaster program disk and a data disk (supplied by you). Facilitates up to 36 separate accounts. You must name your own accounts and designate your own account numbers. Each account has the capability of holding 100 entries and up to 700 total entries per 3.3 DOS data disk. A new data disk may be started at any time and balances brought forward. A standard practice is one data disk per month.

Balances may be obtained at any time. Press one button and all the balances from asset totals to net gain will appear on your monitor for easy access. The balance total may be as large as \$10,000,000. Each individual entry can be up to \$1000,000 with the capacity of the account being up to \$1,000,000.

The edit feature allows you to correct errors at any time. You are allowed to add in a forgotten entry or change a wrong entry.

Another feature of the General ledger programs is "Locking Records". Each General Ledger program disk has its own secret password. Any wrong password will erase the program from the machine (Don't Worry- it won't erase your disk). This feature is just a precaution against unauthorized scrutiny and is not a substitute for normal security procedures.

**PRICE: \$79.95**

**TITLE: GENERAL LEDGER**

**PUBLISHERS NAME: CONTINENTAL SOFTWARE**

**DESCRIPTION:** A general ledger program for the Apple that your accountant will like.

Complete step-by-step instructions.  
Automatic double-entry. Complete audit trails. Menu Driven.  
Easiest to use. Hi-Res charting of all accounts. Maintains  
Complete Year's history of all transactions. Error-checking.  
**PRICE: \$175.00**

**\$ 15.00 Manual only**

**TITLE: GENERAL LEDGER**

**PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**

**DESCRIPTION:** Double-entry bookkeeping with complete and accurate accounting, audit trail, P/L, balance sheets, general journal, activity report, trial balance, and more. Basically integrated with Accounts Payable and Accounts Receivable.

**PRICE: \$350.00**

**TITLE: GENERAL LEDGER**

**PUBLISHERS NAME: WILSON JONES**

**DESCRIPTION: Features:**

- \* Company can customize this package to meet its requirements for its own chart of accounts, income statement format, selection of journal entries used.
- \* 40 different entries can be made. Monthly budgeting is possible. Account numbers can have up to six digits.
- \* Account balances for 24 periods with audit trails.
- \* Income statements present month-to-date as well as year-to-date comparisons. Actual results may be compared to budget or previous year.
- \* Accept either manual journal entries or those automatically posted from either Wilson Jones accounting packages.
- \* Not necessary to close books for one month before making subsequent month entries.

**Reports Generated:**

Monthly Trial Balance; Quarterly Trial Balance; Comparative Balance Sheet; Income Statement (comparison to previous year); Income Statement (comparison to budget); Detail General Ledger; Journal Activity Report; Master Chart of Accounts; Budget Worksheet.

**PRICE:**

**TITLE: GENERAL LEDGER MODULE**

**PUBLISHERS NAME: SENTIENT SOFTWARE**

**DESCRIPTION:**

**Features:**

- Automatic error checking insures accuracy of entries.
- Each journal entry or disbursement may be distributed as to as many as 21 different General Ledger accounts.
- Permits automatic journal entries for such things as accruals, depreciation and prepaid expenses.
- Permits automatic cash disbursements.
- Immediate access to all account and reference numbers while entering data.
- Prints month-to-date journal transactions at any time.
- Produces classified Income Statement and Balance Sheet with user-defined classifications. Up to 5 Classifications permitted per account range.
- Produces detailed General Ledger.
- Produces up-to-the-minute trial balance at any time.
- Allows up to 255 user-defined General Ledger accounts.
- Permits up to 10 user-defined departments for income and expense accounts.
- Edits journal entries while maintaining the integrity of ledger

balances.

- Edits on screen during data entry.
- Prints checks or records handwritten checks.
- Cash sales may be entered on a user-defined screen which mirrors the company's standard cash reconciliation sheet.
- Optional cost-of-sales range.
- Reprints information from previous months.

#### REPORTS

Chart of Accounts: Lists all General Ledger account names and numbers.

General Journal: Lists each General Journal entry for the month.

Detailed General Ledger: Lists details of all activity for each account during the month.

Income Statement: All income and expense account totals are listed for month and year to date.

Balance Sheet: Lists all asset, liability and capital accounts with their current balances.

Three-Column Trial Balance: Lists opening balance, total of monthly activity and current balance for each account.

Check Register: Lists payee, date and amount for all checks written during the month. Checks are listed in numerical order.

Cash Disbursements Journal: Lists all disbursements made during the month and the accounts to which they were posted.

Cash Sales Journal: Lists all cash sales entered during the month, along with a monthly summary.

Cash Receipts Journal: Lists all bank deposits made during the month and the accounts to which they were posted.

#### PRICE:

#### TITLE: GENERAL LEDGER PACKAGE

PUBLISHERS NAME: SMALL BUSINESS COMPUTER SYSTEMS

DESCRIPTION: It features:

6 digit account numbers.

31 character account name.

Ten levels of subtotals - giving you a more detailed income statement and balance sheet.

Departmentalizing...up to nine departments.

Flexibility - adaptable to a printer and either cash or accrual accounting methods.

Cash Journal allows a 33 character transaction description and automatically generates the appropriate offsetting entry.

You can print the balance sheet and income statement for the current month, current quarter, or any of the previous three quarters. This year's or last year's totals are also included on the income statement. Or a special report that lists the current account balance for selected accounts.

Higher number of entries from an external source - as many as 1,000 per session.

No limit on entries - giving you the opportunity to make your entries as many times or as often as you want.

With high speed printer routines and other features of our conversion, processing performance does not decrease dramatically at the system limits. Look at these examples of times required to update the chart and print the audit trail.

With 133 item chart of accounts 700 postings into 70 accounts; less than 20 minutes.

With 133 item chart of accounts, 1000 postings into 70 regular accounts; less than 30 minutes.

With 210 item chart of accounts, 1000 postings into 125 regular accounts; less than 40 minutes.

There is a capability to archive up to 2500 postings. The chart of accounts will also be archived to maintain the opening balance for the archive period.



In the final analysis, your financial statements are what this General Ledger is all about. And with this General Ledger Package you can format your own balance sheet and income statement. As well, department financial statements may be formatted differently. You have complete freedom to place titles and headings where you want them, skip lines or pages between accounts and generate subtotals and totals throughout the reports - up to ten levels if you need them.

Accounts Payable/

Receivable are also available.

	5 inch disk	8 inch disk
Vendors or Customers	700	1,800
Payable Transactions	350	750
Payable Invoices	380	840
Receivable Transactions	600	1,300
Receivable Invoices	600	1,300
Available on Corvus Units Also.		

#### PRICE:

#### TITLE: GENERAL LEDGER WITH PAYABLES

PUBLISHERS NAME: BRODERBUND SOFTWARE

HARDWARE REQUIREMENTS: two disk drives

DESCRIPTION: FEATURES:

- \* Up to 4,000 accounts - Uses user definable account numbers of up to 9 digits, separable into 3 levels.
  - \* Values up to \$9,999,999,999.99.
  - \* User definable report generator - User decides what accounts are grouped on each line of the report. User decides what account groups to subtotal, total, take differences of, etc. User definable titles.
  - \* Very little direct journal entry required - Automatic journal interface to Accounts Payable (included with General Ledger package). Automatic journal interface to Broderbund Payroll (if installed) and Accounts Receivable (if installed).
  - \* Unlimited journal entries - Use as many disks as you need.
  - \* User definable automatic periodic journal entries - Depreciation, amortization, reserves, etc.
  - \* Chart of accounts printed with/without account balances.
  - \* Reports include month to date, year to date, and % comparison to last year same month (or any month), budget, % of sales, etc.
  - \* User explicitly defines up to 13 "months" in the accounting period.
  - \* Provides for trial balance, end of period/year closing, and includes many user definable general and printer parameters.
  - \* Print activity reports by journal source, date range, account number, or journal entry number.
  - \* Explicit posting step to GL...automatic once started.
  - \* Budget creation function.
- The Accounts Payable module is included with the General Ledger Package. Accounts Payable include:
- \* Enter/change vendor
  - \* Enter/change invoice
  - \* Query vendor
  - \* Print checks - User may define range of checks to be printed
  - \* Hand/void check
  - \* Age reports to 180 days
  - \* Automatic journal entry.

#### PRICE:

#### TITLE: HAYES CONDENSED GENERAL LEDGER PROGRAM

PUBLISHERS NAME: HAYES COMPUTER SYSTEMS

BUS-52



**DESCRIPTION:** A condensed general ledger available for companies and small businesses. Available in summary type entry with print outs of summary posting, transactions reports, account number sequence, (general ledger), income statement, balance sheet and a trial balance.

**PRICE:** \$199.00

#### **TITLE: LEDGERPLUS**

**PUBLISHERS NAME: MICROSOURCE**

**HARDWARE REQUIREMENTS:** two disk drives, Apple serial or parallel I/O card; any serial or parallel 132-column printer.

**DESCRIPTION:** A complete General Ledger, Accounts Payable and Accounts Receivable.

##### **ACCOUNTS RECEIVABLE**

###### **GENERAL CAPABILITIES**

Balance forward without invoicing; aging is current month, 30-60-90, and over 90 days; transaction detail removed monthly after statements are printed and preserved on backup; statements are designed to be mailed in standard windowed envelopes.

###### **SPECIAL FEATURES**

Job control forms; complete quick display of an account on screen; operator only has to determine the type of transaction to enter data, all entries are positive dollar amounts; credit status on aging reports assists in establishing customer credit limits; finance charges are selectively applied; statements include detachable return stub, current and post balances with 30-60-90 aging.

###### **DATA CAPACITY**

Adaptable from less than 50 accounts and 1800, transactions to 400 accounts and 400 transactions; no limit on number of statements per month; maximum balance up to \$99,999,999.99; no limit on number of entries per entry session; multiple data disks may be set up for each company or department.

##### **ACCOUNTS PAYABLE**

###### **GENERAL CAPABILITIES**

Open item with automatic, manual, partial, deferred and selected payments; invoice vouchers may be distributed to an unlimited number of General Ledger accounts; flexible time-framing to predict cash flow and anticipate discounts; aging is current month, 30-60, 60-90 and over 90 days; checks are designed to be mailed in standard windowed envelopes.

###### **SPECIAL FEATURES**

Job control forms; complete quick screen review of accounts and vouchers; rescheduling worksheet; printouts of Transaction Entry Journal create audit trail of voucher rescheduling and adjustments; history listing tracks payment of voucher towards full payment; immediate aging of vouchers based on invoice date.

###### **DATA CAPACITY**

Adaptable from less than 50 vouchers and 550 vendors to 300 vendors and 300 vouchers per month; total amount due cannot exceed \$99,999,999.99.

##### **GENERAL LEDGER**

###### **GENERAL CAPABILITIES**

Balance Sheet and Profit/Loss statement can be generated for current and previous months; formatting of financial statements may be determined by the user; keeps account balances for current and previous month.

###### **SPECIAL FEATURES**

Adaptable user defined financial statement captions with provisions for sub-total, underline, insert date, vertically space, center captions and headings; error checking routines; current and prior financial statements may be generated at any time.

#### DATA CAPACITY

Adaptable from less than 50 accounts, 80 financial statement captions and more than 1480 transactions, to more than 280 accounts, 220 financial statement captions and 120 transactions per data disk; unlimited batch entries; eight-digit account numbers; up to 99 subaccounts and 99 departments.

No accounting expertise is required to operate LedgerPlus. It's simple to use. Each LedgerPlus module is self-contained on one program disk and one data disk. No need to swap disks. Data entry is quick and straightforward. Each module operates independently and provides accurate, printed audit trail of all data entered or changed.

LedgerPlus is fast. No lengthy sorting delays or time consuming operating procedures. And LedgerPlus allows more flexible financial reporting, greater account and transaction capacity.

#### EASE OF USE

Requires no accounting knowledge for data entry; requires no lengthy data sorting; no disk swapping necessary to run each module; additional data disks may be simply created from blank disks; accidental reset or power failure will only affect an account being posted at the time of failure, otherwise no effect.

#### PRICE:

#### TITLE: MAXILEDGER

#### PUBLISHERS NAME: COMPUMAX

**DESCRIPTION:** An enhanced General Ledger package offering user-definable detail and sub-total accounts as well as divisional reporting capabilities. The user is required only to: 1) initially set up a Chart of Accounts, and 2) enter data describing subsequent transactions on those accounts.

All account matching, balancing, totalling and report generating will be performed automatically by the program.

Maxiledger is entirely "menu-driven", allowing the program user to simply select among options displayed on the screen at each decision point. Safeguards prevent data loss due to incorrect data entry procedures.

Features include:

- \* Automatic Double Entry: You may create two simultaneous transaction records by entering the data only once. The program will create both the debit and the credit records assigning the correct sign to the amounts.
- \* Divisional Reporting Capabilities: Up to 10 divisions available in the Chart of Accounts at user's discretion. Reports may be generated by division or as consolidated documents.
- \* User-Definable Sub-Total Accounts: Users may establish sub-total accounts in the Chart of Accounts to compute the totals of preceding groups of accounts.
- \* Account Verification At Entry Time: Users are prevented from debiting or crediting transactions to non-existent accounts because the program verifies each account number entered before accepting it.
- \* Changes In Financial Position Report: This report compares ending balance of accounts before posting of the Journal with ending balances of the accounts after posting and computes the percentage change.
- \* General Ledger Run: This report is generated automatically after every posting, sorting all accounts in order of ascending account number and providing detailed descriptions of all transactions. Also displays opening balance and ending balance for each account posted to.
- \* Profit And Loss Statement: This report is available both as a consolidated report and as a separate report for each division. Both amounts and percentages are shown.

- \* Balance Sheet: Also available both as a consolidated report and as divisional reports.
- \* Current, Month-To-Date and Year-To-Date Amounts Reflected in file Listings and Reports.

**PRICE:**

**TITLE: MICRO-GENERAL LEDGER**

**PUBLISHERS NAME: SERENDIPITY SYSTEMS, INC.**

**DESCRIPTION:** Designed with the needs of very small businesses in mind, the Micro-General Ledger allows the user to retain financial control while requiring only a minimal knowledge of accounting. It features a user-defined chart of accounts, interactive data entry and editing routines, extensive error detection devices and automatic end-of-month and end-of-year resetting of totals. Reports produced include a Chart of Accounts, an Operating Statement, a Balance Sheet, and an Accounts Reconciliation Report. The system can accommodate 75 accounts, and each may be assigned a total of 9 sub-account numbers.

**PRICE:**

**TITLE: MICROACCOUNTANT**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** Are you running a small business and trying to keep your books manually? Upgrade and reduce errors with this general purpose financial accounting system. Microaccountant provides you with a standard double entry ledger system including a:

**Transaction Journal:** For recording, reviewing and posting transactions to the accounts. Up to 1,000 transactions per month.

**General Ledger:** Includes up to 300 accounts divided into the following categories:

- |                              |                       |
|------------------------------|-----------------------|
| - Cash and Equivalent        | - Accounts Payable    |
| - Accounts Receivable        | - Taxes Payable       |
| - Inventories                | - Accrued Liabilities |
| - Prepaid Expenses           | - Capital Stock       |
| - Investments                | - Retained Earnings   |
| - Land, Building & Equipment | - Expense             |
| - Depreciation               | - Revenue             |
| - Notes Payable              |                       |

**Report Generator:** For creating these reports:

- Transaction Journal Listings
- Individual Account Transactions and Balances
- Short Form Accounts Balances
- Standard Balance Sheet
- Net Income Statement

The system provides an interactive menu-driven series of commands that greatly simplify using the program. The reports can be directed to CRT or printer output. A minimum 40-column printer is required for hard copy.

The program is written in Basic and supplied in copyable source code for ease of back-up.

It is supplied on a single diskette together with an instruction manual and demo data file.

**PRICE: \$49.95**



**TITLE: MICROLEDGER****PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** MICROLEDGER performs the essential duties of dual entry bookkeeping and the matching of revenues and expenses. The first program builds and maintains your CHART OF ACCOUNTS master file.

This file also holds your current and accumulated totals in each account. You may have up to 884 accounts. The second program sets up and updates your JOURNAL transaction file.

Next, you will do your TRIAL BALANCE. You have several resources to make adjustments to your figures.

Once you approve of the figures, you go ahead and do your POSTING. The program now outputs an AUDIT TRAIL of all your transactions. These are sorted by account number, to make it very easy to trace the story behind the figures. The audit trail output also becomes a fine front page for your string binders, in which you keep your actual records.

Another backup produced by the system is the diskette itself. Here you have two alternatives. You may just retain each data diskette as a permanent record for that accounting period. This practice allows you late reruns, modeling, etc. Or else, you may rename and resave your data files on the same disk. Say your September '78 journal becomes SEPT78. In this fashion, you may keep many old files on the same disk.

Finally, you get your financial reports. The fifth program produces your PROFIT AND LOSS STATEMENT. An easily read standard format shows all your accounts by category, your total revenues, total direct expenses, total G & A expenses and your income (or loss) for the period.

The last program prints (or displays on the screen) your BALANCE SHEET Assets, liabilities and owners equities are shown by account and by totals. Since there are only two files, the system may be set up rapidly. Both current and prior period adjustments are made quickly, either by journal update and rerun or directly via chart update in a single operation. Thus the system is eminently suitable for "What-if" kinds of modeling usage.

**PRICE: \$140.00**

**TITLE: NO-NONSENSE BOOKS****PUBLISHERS NAME: MONEY DISK**

**DESCRIPTION:** A general ledger package for the small business. It is set up for the businessman who has high school level bookkeeping skills but desires professional skill applied to his accounting. Simple to use and because it is so similar to high school double entry bookkeeping, learning time is about two hours. The system is organized around 5- pre-named accounts including two checking accounts. The system maintains records of sales in five Profit Centers for retail and wholesale accounting. Account and Profit Center names may be changed if desired. The need to set up a Chart of Accounts and define new account numbers is thus avoided. The system maintains complete records of each check written and all journal entries. Each transaction must be balanced before being accepted for recording directly to the ledger accounts. A 64 page user's manual is provided.

**ACCOUNTING FUNCTIONS:**

- \* Automatic Verification of each transaction entry
- \* Two Checking Accounts with check and deposit records
- \* Checkbook Reconciliation
- \* Cash Drawer Clearing Routine
- \* Summaries of each account group available on screen



- \* Summary of Sales for current and last month plus year to date
- \* Instant Estimated Profit and Loss Statement on screen at any time
- \* Automatic year end adjustment and closing of books for next year
- \* Look up check or journal records at any time
- \* Tally Sales Invoices

PRINTED REPORTS AND MISC. DATA:

- \* Sales Summary and Inventory Turnover
- \* Operating Summary
- \* Profit and Loss Statement by Profit Center
- \* Trial Balance
- \* Formal Profit and Loss Statement
- \* Formal Balance Sheet
- \* Year end Worksheet
- \* Above reports available separately or in groups at any time
- \* Printed records of check and journal entries
- \* Printed Chart of Accounts

PRICE: \$225.00

**TITLE: SUPERLEDGER**

**PUBLISHERS NAME: SOFTWAND SOFTWARE**

DESCRIPTION: General budget and cost (profit and loss) ledger system.

PRICE:

**TITLE: SYSTEMS II EX - GENERAL LEDGER**

**PUBLISHERS NAME: WESTWARE SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: Two disk drives, 132 column printer**

DESCRIPTION: The GENERAL LEDGER is a product of all that happens within the system. It receives its information via the GENERAL JOURNAL which can hold up to 800 entries before updating the LEDGER. From the GENERAL LEDGER is run the Balance Sheet and the Profit and Loss Statement.

The GENERAL JOURNAL Entry Screen can support up to 99 entries at a time. A running balance of the Debits and Credits is always displayed along with the out of balance amount. Forward and reverse scrolling is supported, along with a test for a possible transposition error. A 30 character descriptive field is available.

PRICE: \$425.00 for 5 1/4" Floppy

\$475.00 for Corvus

**TITLE: THE COMPUTER PROGRAMMED ACCOUNTANT CPA-1 GENERAL LEDGER**

**PUBLISHERS NAME: CONTINENTAL SOFTWARE**

DESCRIPTION: True double entry bookkeeping with complete, accurate audit trails showing the source of each entry in the general ledger. Concise, meaningful reports generated include Balance Sheet, Profit & Loss Summary, Trial Balance and complete Journal Activity Report. Reports show monthly, year-to-date and last year monthly + YTD for comparisons. Custom charting feature includes Hi-Res plotting of one or more accounts.

PRICE: \$15.00; manual

\$250.00

## INVENTORY CONTROL

### TITLE: INVENTORY CONTROL

#### PUBLISHERS NAME: COMPUMAX

DESCRIPTION: INV1- Initializes both Transaction and Master files, adds and updates Transaction and Master records; initializes JOURNAL file, restarts Master file.

INV2- runs, issues or receives Transactions, creating inventory records. It also journalizes and accumulates Transactions (creates entries in its MICROLEDGER'S JOURNAL file)

INV3- Lists both Transactions and Master files

INV4- Supplies Stock Analysis Report, and the ABC Analysis

INV5- Produces the report showing allocation of all materials used year to date by JOB Control classification codes

INV6- Computes and provides the E.O.O. (Economic Order Quantity)

#### PRICE:

### TITLE: INVENTORY MANAGEMENT SYSTEM FOR STOCK CONTROL

#### PUBLISHERS NAME: HAYDEN BOOK COMPANY

DESCRIPTION: Designed to offer a complete and current overview of stock with minimal effort by the operator. Detailed information of any item is literally placed at your fingertips. The system will also keep track of stock activity thereby eliminating the problems of inventory excess and shortage. With the INVENTORY MANAGEMENT SYSTEM you will enjoy greater inventory control and, more importantly, lower costs for your business.

#### Features:

- \* Handles one to six disk drives for capacity of 48000 items.
- \* Unique machine language database for super-fast retrieval.
- \* User friendly menu-driven operation.
- \* Stores Part Number, Description, List Price, Substitute Part Number, Manufacture Code, Supplier Code, Seasonal Adjustment Code, Date Last Order Received, Date Last Consumed, Last Physical Inventory Date, Date Record Entered and Six Months Consumption History for each item.
- \* Transactions include Enter Inventory Consumption (shipping), Enter Orders Received (receiving), Add/Remove Items on Backorder, Add Returned Items to Inventory, Place an Item on Order and Enter Physical Inventory Counts.
- \* Reports include inventory Listing by Part Number, Parts on Order, Parts on Backorder, Extended Inventory costs, Consumption History Reports and Obsolete Parts in Stock.
- \* Fifteen-digit Part Numbers.
- \* Substitute Part Number Scheme for fast alternatives to out of stock items.
- \* Full user definable Backorder tracking.
- \* Substitute Part Number Scheme for fast alternatives to out of stock items.
- \* Full user definable Backorder tracking.
- \* Single-and Dual-Disk Copy/Verify Program for ultimate data security.
- \* Disk Certify Program for database disk testing.
- \* Maintains six months Consumption History.
- \* Easily interfaces to any 80 or 132 character printers for 80 or 132 character reports.
- \* Prints worksheets and checklists for Physical Inventory.
- \* Real-time or Batch entries.

PRICE: \$175.00

### TITLE: INVENTORY PROGRAM

#### PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS

HARDWARE REQUIREMENTS: 132-column serial/parallel printer

BUS-58

**DESCRIPTION:** 2 disk drives, menu-driven program. Inventory categories include: STOCK #, DESCRIPTION, VENDOR ID, CLASS, LOCATION, REORDER PT., REORDER QTY, QTY ON HAND. All records can be entered, changed, updated, deleted, or viewed. Reports can be sorted in ascending/descending order by any category. There are 7 search reports (3 automatic). Calculates \$ VALUE of inventory and YTD, MTD, and period items sold. Accumulates inventory over a 13-month period. Complete turnkey operation with bootstrap diskette. Program diskette and instruction manual.  
**PRICE: \$140.00**

**TITLE: MICRO-INVENTORY**

**PUBLISHERS NAME: SERENDIPITY SYSTEMS, INC.**

**DESCRIPTION:** Developed with the particular needs of small businesses in mind, the Micro-Inventory package provides owners of such firms with effective inventory control. Each inventory item is assigned a unique item identifier by the user, and data are stored in logical files. Although the capacity of the system is normally limited to six such files of 200 items each, multiple diskette drives can be used to accommodate additional inventory items. Reports provided include items on File, items on Hand, items on Order, items at/below Stocking Levels, MTD Sales and YTD Sales. Each report can be generated to include all inventory items or only those specified by the user.

**PRICE:**

**TITLE: MICROBOMB**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** A software package written specifically for the small manufacturer. Designed to handle inventory control and materials requirement planning, and will also "explode" your bill of materials. The program sets up and maintains several files: 1) a stock file that contains descriptive information for each item; 2) a bill of materials file that defines the product structures; and 3) a scheduling file that contains production schedule data.

Entering data into files is quick and easy because the user is prompted for each element of information required. Update routines are available to modify or delete entries. All files may be listed on the screen or printer at any time.

The program maintains inventory sorted alphanumerically by part number. The inventory information will be automatically updated by entry of issue and receive transactions and/or by the processing of inventory net-out after the Bill of Materials program is run.

Reports available include:

- \* Standard Stock Status Report showing inventory valuation at any of the following;

Cost

Retail

Discounted Retail

- \* ABC Analysis

- \* Materials Requirement Planning Report

- \* Bill of Materials Explosion

- \* Max/Min Report

**PRICE:**

**TITLE: MICROINV**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** MICROINV is a series of computer programs that carry out the INVENTORY CONTROL functions for a small business.

There is an inventory transactions file and a master file. The data employed are the following:

Item number and description

Quantity on hand

Quantity on order and delivery date

Unit price and name of units used

Lead time, Reorder point and Safety stock

ABC class describing frequency of usage

Vendor Name

Job Allocation

Each transaction is identified by entering the quantity issued or received, current price and job or work order classification for an issue.

The program will accumulate the transactions: current average cost, LIFO (Last-In-First-Out cost, year-to-date usage and job cost allocation will be updated.

At anytime you may ask for:

Stock Analysis Report, showing your standard inventory stock data and stock valuation.

ABC Analysis, breaking down the inventory into groups separated by frequency of usage.

Job Cost Report/Materials, showing totals allocated to each job or work code used. When this report is used jointly with Job Cost Report/Personnel in MICROPERS, you get complete job cost control.

Economic (or Optimal) Order Quantities for all items for which you have cost of placing an order, expected annual demand and annual inventory carrying cost available.

Finally all inventory receipt or issue transactions will be journalized and made available to MICROLEDGER for automatic entering into your trial balance, posting and financial reports.

**PRICE: \$140.00**

#### **TITLE: QUIKDIRT - IN-PROCESS INVENTORY**

**PUBLISHERS NAME: WYMAN ASSOCIATES**

**DESCRIPTION:** In a multi-stage production process, each stage passes a certain fraction of product to the next stage, some is scrapped, and some is recycled for re-work and re-inspection. It is necessary to estimate the size of the inter-stage inventories, how much input is required to assure a given yield, and the effects of changes in the fractions of scrappage and recycle.

This program helps you estimate these values by means of an underlying matrix model of flow patterns which you supply to the program. You can change the starting levels of product in any stage, as well as the amounts and directions of flow. You can also adjust the number of time periods into the future in order to see how inventory levels will change in each stage over time.

**PRICE: \$120.00**

#### **TITLE: QUIKDIRT - WAREHOUSE LOCATION**

**PUBLISHERS NAME: WYMAN ASSOCIATES**

**DESCRIPTION:** If you have a growing business with several distribution outlets, and are planning to add new warehouse locations, you can use this package to help decide which warehouse sites should be selected. Inputs include an estimated shipping budget from each warehouse to each destination that can reasonably be supplied by that warehouse. The output is a prioritized list of warehouse sites to be developed and which warehouses should be supplying which markets.

**PRICE: \$120.00**



**TITLE: STOCKROOM****PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Stockroom is a fast terminal type inventory program and purchasing tool element that can keep your stockroom efficient and part of your money-making operation. You can keep track of your stock, its costs, its selling price and your vendors with ease. You can have the Apple search the files for an item number, an item description,, or display all items supplied by a particular vendor. The purchasing package will help you estimate demand for a new item, estimate stocking levels and determine order points. When it's time to take inventory, all you have to do is push a few keys.

**PRICE: \$89.95****TITLE: SUPERFOX****PUBLISHERS NAME: WEST COAST CONSULTANTS**

**DESCRIPTION:** An inventory control, sales journal program designed specifically to aid mobile home dealers. This incredible computer program will save you time and effort with your mobile home transactions.

Records for up to 100 stock units (homes) can be maintained on a single low cost 5-1/4" data diskette. Once a mobile home is sold and sales information submitted to the program, the unit is automatically removed from the inventory file and placed into a sales journal file. All records are accurately maintained and can be displayed on the TV monitor or printed on a line printer in several useful ways.

You can instantly examine accumulative totals for taxes, commissions, fees and profits between any two specified dates. All stock in inventory as well as stock which has been sold may be listed by type, serial number and location as of any arbitrary date. This feature allows you to generate a printout history of your business' progress.

The sales function will assist you as you negotiate a sale with a potential buyer by providing you with prompt calculations of monthly payments, true APR, total interest and principle. These figures will be generated based on your input particulars, such as, term, add on interest rate, sales price and tax, license fees and insurance options, etc.

You will be able to instantly roll the down payments, interest rates, prices, trade ins, insurance and adjust payback terms to accommodate the budget of your potential buyer. Common mistakes which formerly frustrated both you and your buyer will be eliminated, saving you time, trouble and a possible loss of the sale. Finally, after you consummate a deal, the program will spare you the pain of both figuring and filling out the sales contract. All this will be done for you in one simple, fast and precise operation.

Another bonus feature of this program is that it gives you the capability to pick up the odd days interest beyond the 30 day value (given in your rate charts) up to the 45 day limit of the first loan payment. You should be able to more than recover your monthly lease payment on the Superfox system with the added profit from just one closed deal each month.

This program was developed using information gathered from California mobile home dealers.

**PRICE:****TITLE: SYSTEMS II EX - INVENTORY****PUBLISHERS NAME: WESTWARE SOFTWARE, INC.****HARDWARE REQUIREMENTS: Two disk drives, 132 column printer**

**DESCRIPTION:** The list of the file will give you a complete

printout of the inventory with a total dollar amount at the end. The 5 1/4" version holds 1000 items of inventory. The Corvus version holds 28800 items. This is formatted on 36 volumes of hard disk in the following manner:

Ten volumes are allotted for the numeric digits 0-9. Twenty-six volumes are allotted for the letters A-Z. With this format, you may have 800 part numbers starting with the number 2, and so on. With the letters you also may have 800 part numbers starting with 'A', 800 with 'B', and so on for a total of 28800 parts.

**POINT OF SALES** - within the **INVENTORY** module the following functions are allowed:

**SALES** - This allows a cash or charge sale. If it is a charge sale, the customer's name and address are brought to the screen along with the invoice format. The following functions are allowed:

1. Sales tax per item or per invoice
2. Discount per item
3. Discount per invoice
4. Choice of 7 Sales/Cost Accounts
5. Choice of 7 Misc. Revenue Accounts

**NOTE:** After the invoice has been completed, the following occurs:

1. Invoice is Printed
2. Inventory is Depleted
3. Customer File is Updated
4. Receivables is Updated

**PRICE:** \$425.00 for 5 1/4" Floppy  
\$475.00 for Corvus

#### **TITLE: THE CASHIER**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** The Cashier is an inventory control and cash register simulation system. It simplifies the retailer's job by eliminating redundant work in filling out lists and forms. Once a customer account is entered, the information is automatically used to generate sales receipts, billing records, mailing lists, and accounting summaries. The Cashier also gives a retailer better control of inventory, resulting in reduced shrinkage. The Cashier can process backorders, down payments, and refunds, managing an inventory of more than 800 stock numbers. The system is packaged in a binder with a manual and diskettes.

**PRICE:** \$250.00

#### **TITLE: THE INVENTORY CONTROL SYSTEM**

**PUBLISHERS NAME: SOFTECH**

**DESCRIPTION:** Large capacity: the system will handle up to 9500 DIFFERENT items, with two-second access.

Menu-driven: all commands are selected from a menu, which is always automatically presented on completion of each command. Documentation is oriented to users - people who know their business, but may not be familiar with computers. There's both a Tutorial Manual for step-by-step guidance for getting started, and a comprehensive Operator's Guide for operating details. Exclusively for the APPLE II - uses a fast disk filing method utilizing specially written machine language routines to speed up access (maximum two seconds for any part). We know the APPLE extremely well, and there are no compromises to make the package fit other machines.

Each STOCKFILE package includes complete documentation, and TWO protected diskettes. Every effort has been made to provide perfect copies, and of course we will replace any diskette that

is damaged, whether by misuse or not, for a charge of \$10 and the return of the original copy.  
A sample inventory system is included, so that the user can see how a typical system operates. Thorough instructions guide the user through the steps necessary to set up STOCKFILE.  
Password protection against unauthorized alteration of information is provided. Staff can make inquiries, but may not alter prices, stock totals, and other critical information, unless armed with the management password.  
Automatic price averaging (if desired), turnover reports, low inventory signals, and a comprehensive BACKUP/RECOVERY procedure.  
**PRICE:**

**TITLE: THE INVENTORY MANAGER**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** A complete inventory package that keeps inventory, statistics, vendors, reorder points, back orders, master order status, writes reports, calculates all profit margins, and more. Updates mark up, lists wholesale and retail prices, generates summary and order reports. Limited access version included to protect managerial information. Handles 99 vendors and 2300 items on a 2 disk system.

**PRICE: \$150.00**

**TITLE: THE ORDER SCHEDULER**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** Compatible with The Store Manager (TM) Automatically maintains up-to-date purchase order information including total quantities of items on order, shipping schedule, total number of items to be shipped on the scheduled date and the backorder quantity.

Produces several reports, some of which will utilize the inventory file information from The Store Manager.

**PRICE: \$150.00**

**TITLE: THE STORE MANAGER**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** High Technology is re-introducing The Cashier (TM) formerly marketed by Apple Computer, Inc., under the new title The Store Manager.

The Store Manager is a point of sale system which also provides real time inventory control.

Produces purchase orders, receiving reports, invoices, packing slips and quotations.

Maintains up-to-the-minute sales totals and generates inventory management reports.

In effect, it is a package which manages the sales and product flow of a small business.

**PRICE: \$250.00**



## **JOB CONTROL**

### **TITLE: JOB CONTROL SYSTEM**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**HARDWARE REQUIREMENTS: 2 Disk Interface Cards, 132 column printer**

**DESCRIPTION:** If you're in manufacturing, construction, or a service industry, this system can give you the valuable management information you need in order to keep close control over what's going on in your business. As each job progresses, profit/loss potential is constantly monitored. With JSC: labor and machine productivity is improved; potential problems are spotted easily; departmental efficiency is fine-tuned; job estimating is more accurate; late deliveries are curtailed; customer satisfaction is improved; work-in-process inventory value is computed accurately.

No computer knowledge is necessary. The program guides the user in plain English. The accompanying instruction manual contains lots of illustrations and examples so that even non-computer people can quickly learn to use and enjoy the system. In fact, a step-by-step trail run helps the user become completely comfortable with the system operation before entering any "real" data.

Customized reports show only the information needed by a company manager. There is no confusion.

JCS shows quickly and clearly excessive material costs, time spent, and/or downtime problem areas. JCS provides a reliable measure of overall productivity for each job and it facilitates prompt billing for improved cash flow.

All labor hours, outside service costs, material costs, production quantities, shipped quantities, etc., are posted to JCS and printed on a daily Post Audit Trail. It presents total posted hours for each employee plus a grand total for all employees.

The Job Control System can be easily integrated with your existing method of collecting hours, costs, and quantities produced. The system can be used by any small or medium sized company in the construction, manufacturing, or service industry.

**PRICE: \$750.00**

### **TITLE: JOB COST SYSTEM**

**PUBLISHERS NAME: SCRIPPS DATA SYSTEMS, INC.**

**DESCRIPTION:** At the core of your business is profitability. And profitability depends upon productivity. Meeting your business goals requires current and accurate information to support decision making. To do that, you need a system...the SDSI Job Cost System. The SDSI Job Cost System is a low-cost, adaptable reporting tool which organizes and monitors information critical to business decisions and daily operations. Business managers and professionals in any size business can use this comprehensive software, developed specifically for use with Apple II or Apple II/Plus Computer.

The SDSI Job Cost System is easy to use, easy to understand. it is user-friendly. Menu-driven, and well-written by professionals in the Job Cost field.

**PRICE:**

### **TITLE: JOB COSTING SYSTEM**

**PUBLISHERS NAME: PADMEDE COMPUTER SERVICES**

**HARDWARE REQUIREMENTS: 2 Disk Drives with controllers, printer**

**DESCRIPTION:**

- Used specifically in the Print Industry
- Cost for each Job dependent upon the Amount of time per Operation



- Each Operation has a rate
- Input Start and End times from Operator's Time Sheet
- Additional costs can be associated with different jobs
- 999 Job Numbers
- 46 Operations
- 99 Operators
- Full interrogation via screen
- Comprehensive verification of input

**REPORTS:**

Details of costs to Job Numbers; Audit Trail Report; Report on Costs to date; Reporting on completed Jobs.

**PRICE:**

**TITLE: JOB SCHEDULING**

**PUBLISHERS NAME: COMPUTERIZED CONSTRUCTION MANAGEMENT SYSTEMS**

**DESCRIPTION:** this scheduling program creates a bar chart with user specified line items. Line items are entered from the keyboard with time allowed to accomplish each item. This report set is stored for future use, can be altered for a particular job or multiple report sets can be stored for various jobs. The computer then asks for total number of days to complete project, number of lost days per month and date for beginning. The resulting printout schedules which line item has to be accomplished on what day to finish the total job in the allotted days. Primarily set up for residential or small commercial construction projects, though various applications can be created. No limit on number of jobs. Dealer demo's upon request.

**PRICE: \$175.00**

**TITLE: SYSTEMS II EX - SYSTEMS II JOB COSTING MODULE**

**PUBLISHERS NAME: WESTWARE SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: Two disk drives, 132 column printer**

**DESCRIPTION:** The SYSTEMS II JOB COSTING MODULE is used to aid management in tracking costs and man-hours against jobs. Most jobs are made-up from various smaller jobs called tasks. Cost and man-hours, along with other details, are gathered for each task. These task details make up the information for the job report. Individual reports may be printed for the job or individual tasks within a certain job, or you may request reports of all jobs and tasks.

This module may be used separately, as a Standalone, or integrated with the Payables and Payroll Modules of the system. The use of the Job Costing module will help contractors, subcontractors, or anyone that needs to identify cost of jobs and tasks within the job.

**JOB COSTING REPORTING - The following reports are given:**

1. Report by Job
2. Report by Task
3. Report by Start Date
4. Report by Completion Date
5. Report by Activity Date
6. Report by % Completion
7. Variance Report

**PRICE: \$425.00 for 5 1/4" Floppy**  
**\$475.00 for Corvus**

## MISCELLANEOUS

### **TITLE: ADVERTISING MESSAGE PROGRAM FOR APPLE**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** A new cassette computer program converts an Apple computer system into an automated advertising machine for retail stores, restaurants, banks, hotel lobbies and trade shows. This program called "Multi-Message with the Interleaved Kaleidoscope" permits 10 messages (up to 255 characters each) in letters 10% of screen height x 4 lines x 28 characters/line. There can be up to 3 "page per message. Characters are "puffed" on at the rate of 2 per second, and appear in a bluish-white tint on color TV.

A random, dynamic, colored kaleidoscope pattern (of user-determined duration) attracts and holds viewer attention between messages. Instructions for setting up messages are "intermixed" with program code on the cassette, and also appear on screen, so that unsophisticated users are actually "led through" the operating procedure, rather than following "pre-instruction".

**PRICE:**

### **TITLE: AMWAY DISTRIBUTORS PROGRAM**

**PUBLISHERS NAME: COMPUTER FORUM**

**DESCRIPTION:** This program is designed to help the Amway distributor when he is checking orders received from distributors that he has sponsored. With this program you will be able to check the distributors order for accuracy and your own orders as well. Also gives the option of saving the completed order in a file so that at the end of the month, it will generate a distributor bonus report for you.

**PRICE: \$250.00**

### **TITLE: APPLE BOWLING SECRETARY**

**PUBLISHERS NAME: LAST**

**DESCRIPTION:** Six major programs with four text files provide complete accounting for any bowling league. Includes a 25 page instruction manual with superior documentation that meets ABC requirements.

**PRICE: \$29.95**

### **TITLE: APPLELOG**

**PUBLISHERS NAME: MEDIA SERVICE CONCEPTS**

**DESCRIPTION:** APPLELOG is a very comprehensive and powerful radio station logging and billing system. The program enters commercial spot schedules, generates daily program logs, prepares bills and affidavits, and prints useful management reports, including accounts receivable.

**PRICE: \$6000.00**

### **TITLE: APPLESACK 1 - 40 PRACTICAL PROGRAMS**

**PUBLISHERS NAME: COMPUTERMART**

**DESCRIPTION: FEATURES:**

**BUSINESS**

Includes 18 business programs - investments, savings, income, interest, depreciation, salvage, discounts, payments and mortgage schedules.

**UTILITY**

ASCII Codes, Disk info, Base Number Convert, Get Command Use, File Copy

**HOME**

Calculation-Numbers, Plants for the home, Math Help and Problems,

**BUS-66**

Capitals Quiz, Planets and Info (Hi-Res), Metric Quiz and Art Draw (Hi-Res)

**GAMES**

Adventure-Explorer, Bagels Number Guess, Bug-Cootie, Hang-math Numbers, Master Ruler, Fred The Listener, Keno Gambler, All In A Row, Slot Machine, Robot Chase.

**PRICE: \$24.95**

**SOFTWARE**

**TITLE: APPOINTMENTS**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** The APPOINTMENTS program package allows the user to manage an appointment book using the APPLE II computer. Appointments may be viewed directly on the monitor screen or listed on a printer, if one is available. One day of appointments is visible on the screen which may be scrolled up or down in order to view the entire day.

The APPOINTMENTS system provides the following features:

1. User definable starting and ending times.
2. User definable appointment separations.
3. User definable number of characters (maximum) allowed per appointment name.
4. Adding appointments for multiple appointment slots.
5. Delete specified appointments.
6. Jump to any specified day in the appointment book.
7. Search by name (or partial name) for an appointee over any specified region of days in the book.
8. Scroll appointment screen up or down.
9. Move through the appointment book one day at a time, forward or backward.
10. Activate new dates in the book at any time.
11. Deactivate any dates in the book at any time.
12. Add entire groups of appointments to a single day all at once.
13. Show which dates are active in the book.
14. Erase all appointments over a specified time in a given day.
15. Enter and automatically display a comment on any day in the book.

**PRICE: \$75.00**

**TITLE: BOWLING DATA SYSTEM**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: 80 Column Printer**

**DESCRIPTION:** This program for bowling leagues provides accurate record keeping and report generation. For leagues up to 40 teams with up to six bowlers per team. It allows a league secretary to customize all pertinent parameters.

A cumulative record is kept of total pins, games won and lost, total points, high series, and so forth for each team. Besides this information being maintained for each bowler it also maintains high game, handicap, and other data as needed. This system maintains an initial handicap value for a specified number of games.

Weekly scores for each bowler are entered from score sheets provided by the system. It then prints a weekly recap report and the score sheets to be used for the following week, as well as generating team and lane pairings. A season average report is also produced, listing all bowlers in the league in descending order by average.

**OPTIONS:**

- Mixed Leagues
- Multiple Leagues

- Men & Women's Base Score Percent
  - User-defined options for Men & Women Blind Score
  - User-defined options for Men & Women Absence Value
  - Absent Bowler Format; Fixed Amount; Percent of Current Average; Current Average Minus Fixed Amount
  - Definable Maximum Handicap
  - Defined Delay in Handicap Calculations
  - Allows for Team Handicap to be Added to Total Pinfall for the Team
  - Score Sheet to List All Bowlers on a Team
  - Modify Weekly Report
  - Modify Season Average Report
  - Team Listing Report
  - Faster Printing Routines
- 44 pages of documentation comes with it.
- PRICE: \$149.95**

#### **TITLE: BOWLING LEAGUE RECORD SYSTEM**

**PUBLISHERS NAME: DATA STRIKE**

**HARDWARE REQUIREMENTS: 2 Disk Drives, Printer**

**DESCRIPTION:** Complete information of a typical bowling team can be provided in just minutes each week.

#### **FEATURES:**

- complete weekly printout
- computed handicaps on individual and team basis
- list of high games and series for the week
- complete screen score card to check for errors quickly
- schedule for succeeding week on a weekly printout
- year end printouts list all statistics on individual and team basis
- alphabetical team listing
- a complete correction routine

This versatile system is applicable for all leagues and will accept all scoring methods. A bowler can bowl less than three games in a match.

The program guides the user in plain English. No computer knowledge is necessary. Directions for set-up are on the screen. After set-up three entries per bowler per week.

The following information accessible when you need it:

- team standings
- high series and games per week
- high series and games per year
- team and individual handicap
- team schedule
- substitutes records
- year end records

Time saving program that does the records in 1/10 the time.

Handles up to 24 teams per league. No limit of bowlers per team.

**PRICE:**

#### **TITLE: BOWLING TOURNAMENT RECORDS**

**PUBLISHERS NAME: DATA STRIKE**

**HARDWARE REQUIREMENTS: 2 Disk Drives, Printer**

**DESCRIPTION:** Handles up to 2000 bowlers. Prior to start of the tournament enter names of pre-registered bowlers. A number will be assigned at this time to each bowler which will be your access to that bowler.

Those bowlers not pre-registered may be entered when entering scores.

Enter the events scores in any order.

It calculates all events scores. For those players who bowl on more than one team you have the option to use either the first



bowled score or the highest score bowled for all events.

Sorts men and women separately if a mixed tournament.

- Team printouts give team name in expanded print and then lists team players, their scores, handicaps and team series.

- Team printout can also be run without the team players names.

- Doubles scores listed with both players names, handicaps and total score.

- Singles scores listed with scores, handicaps and total pins.

- All events list all nine games bowled by the player with handicap and total pins.

- All tournament events can be printed with or without handicaps.

- List of bowlers may be run either alphabetically or numerically.

Bowlers listed with handicap.

**PRICE:**

**TITLE: BUSINESS PACKAGE I**

**PUBLISHERS NAME: MICRO LEARNINGWARE**

**DESCRIPTION:** Loan Amortization is a complete loan analysis program that will calculate either payment amounts, number of periods, rate of interest, length of loan, or total interest and print an amortization schedule if desired.

Bank Reconciliation accepts bank balance, checkbook balance, checks written, outstanding checks charges, and reconciles a bank statement.

Stock Market Simulation. In this simulation, the players buy and sell stocks with the object of the game being to increase their net worth. The simulation, allows selection from twenty-six stocks that fluctuate in price based on market indicators such as prime interest rate, and inflation rate.

Depreciation. Will calculate depreciation according to the straight line, double declining balance, or sum of the years digit methods. The methods of computation are in accordance with IRS guidelines. The program will also display a depreciation schedule.

**PRICE: \$24.95**

**TITLE: BUSINESS PACKAGE III**

**PUBLISHERS NAME: MICRO LEARNINGWARE**

**HARDWARE REQUIREMENTS: Printer**

**DESCRIPTION:** Chart of Accounts Entry. This program maintains the chart of accounts disk file, adding new accounts, changing or deleting accounts, and prints a new chart of accounts.

Journal Entry. this program accepts journal entries, prints a proof of journal entries, allows corrections to journal entries and posts the entries to the ledger.

Report Print. Prints a trial balance of the general ledger, a profit and loss statement, and a balance sheet.

Note: Included with the system are three projects with solutions.

**PRICE: \$24.95**

**TITLE: BUSINESS VALUATION**

**PUBLISHERS NAME: VERNON TECH CORP.**

**DESCRIPTION:** A useful tool for the life insurance professional, financial planner, attorney or accountant. Produces multiple valuations for closely-held businesses such as book value, adjusted book value, liquidated value and capitalization of earnings. Then compares methodologies for buying out interests.

**PRICE: \$170.00**

**TITLE: CAPITAL NEED ANALYSIS DISABILITY INCOME SUPPLEMENT**

**PUBLISHERS NAME: VERNON TECH CORP.**

**DESCRIPTION:** Uses stored Capital Need Analysis data to produce disability income need analysis for clients.

**PRICE: \$100.00**

**TITLE: CAPITAL NEED ANALYSIS HYPOTHETICAL PROBATE SUPPLEMENT**

**PUBLISHERS NAME: VERNON TECH CORP.**

**DESCRIPTION:** Using stored Capital Need Analysis data, produces multi approach analysis of clients' estate situation.

**PRICE: \$155.00**

**TITLE: CAPITAL NEED ANALYSIS**

**PUBLISHERS NAME: VERNON TECH CORP.**

**DESCRIPTION:** The computer adaptation of Vernon Publishing Services extremely popular life insurance planning package keyed to capital retention and income objectives. Produces general information form, balance sheet and capital analysis, income analysis, total income analysis, usable income test and family betterment chart, and supplemental information form.

**PRICE: \$180.00**

**TITLE: CASHMASTER**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION:** The front counter cash register system. Records up to 100 transactions each day or shift. Accounting of daily money transactions and inventory turnover. Holds 100 inventory items. Has other powerful options.

**PRICE: \$289.00**

**TITLE: CASHMASTER**

**PUBLISHERS NAME: VERSA COMPUTING, INC.**

**DESCRIPTION:** Fully interactive, high speed cash register system. A computer based point of sale cash for recording sales information, printing customer receipts, and end of day reports. Cashmaster can be interfaced to most popular inventory and accounting packages. Software, cash drawer, and interface card are available separately or as a system.

Your Cashmaster and Apple II Computer can be teamed up to stream line your front counter. Sales are quickly rung up with Cashmaster's easy to use entry systems. Customers receive a detailed receipt, and you get a complete report on the day's sales activities. Simple, thorough, fast, and flexible, Cashmaster is also suitable for distributors, wholesalers, and client billing.

**PRICE: \$300.00**

**TITLE: CHECKWRITER**

**PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS:** Centronics 739 printer with grappler interface

**DESCRIPTION:** This prints checks with enlongated proportional print. Its unique feature is that the 'dollars' line is written in alpha characters.

It is for use with bank check supply company voucher checks #DV3.

**PRICE: \$25.00**

**TITLE: CHECKWRITER II**

**PUBLISHERS NAME: COMPUTERIZED MANAGEMENT SYSTEMS**

**HARDWARE REQUIREMENTS: Printer**

**DESCRIPTION:** The perfect supplement for FINANCIAL MANAGEMENT SYSTEM II.

**OBJECTIVE:** Write checks directly from any FINANCIAL MANAGEMENT SYSTEM II file. Insert optional address for window envelope mailing. Define your own custom format or use the standard format supplied with the program.

**FAST EASY-TO-USE**

**OPTIONAL MESSAGES -** May be printed on check or stub along with the item number, date, payee, explanation, amount, code, and any other inserted information desired.

**SAMPLE CHECKS -** Included in package are sample checks, catalog, and complete instructions for ordering your own personalized checks for your printer.

**PRICE: \$19.95**

**\$15.00 if ordered with FINANCIAL MANAGEMENT SYSTEM II**

**TITLE: CLIENT BILLING SYSTEM (C.B.S.)**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** "C.B.S." is a complete client billing system for the Apple II computer. Its use is intended for any business where client billing has become so voluminous that manual billing methods have become difficult to manage. For example, it is particularly well-suited to satisfying the billing needs of CPA's and attorneys. It is a system capable of capturing, tracking, and analyzing all of your client transactions. Its special features include:

**\*JOB COST ANALYSIS**

**\*TRANSACTION ANALYSIS**

**EASY TO USE:** Excellent documentation! In fact, one chapter of the user manual tutors you through a trial run of the system. Also, "C.B.S." is structured around a "menu select" feature, allowing you to interact with the system by simply typing one character to select a program from the "MENU" of programs.

**FEATURES:** There are 4 basic transaction types:

- |                       |                       |
|-----------------------|-----------------------|
| (1) hourly employee   | (3) payments received |
| (2) billable expenses | (4) bids or estimates |

You are provided with hard-copy reports as follows:

- listing of all entries in the transactions file
- listing of hourly transactions
- listing of billable expenses
- listing of all rates held in the rates file
- billing statements

**\*JOB COST ANALYSIS:** Gives you a detailed report of all expenses on a particular project/client and compares the total expenses against the bid (or estimate).

**\*TRANSACTION ANALYSIS:** Gives you a detailed report of all transactions on file for each employee, and provides a "total summary" after each employee. Or you may opt to receive the same report on one individual only.

**FILE CAPACITY:** "C.B.S." was written to assist the small businessman in the tracking and billing of clients' transactions. It is a flexible system. It can be used by those who need to have 10 (or less) hourly rates or by those who have use for as many as 500.

There are 2 major files used by the system: The RATES file which holds the hourly rates for each employee, and the TRANSACTIONS file which holds all client transactions. The maximum number of rates that can be entered into the RATES file is 500.

Depending upon the structure of your business, you may be able to enter up to 900 transactions in one billing period. Below is the

formula you will need to use to determine the maximum capacity of the TRANSACTIONS file for your particular business:

R=the number of rates you decide to store in the RATES file (from 1 to 500).

P=the maximum # of individual projects 'active' during any one billing period. (A project is 'active' if it carries a non-zero balance).

M=the maximum # of transactions you will ever need to enter for any one individual project.

Once you have determined what you think are valid figures for R,P, and M for your business, fill the figures into this formula:

$S = R \times 41 \ll P \times 158 \ll M \times 100$

100

If you have one disk drive only:

Subtract S from 400 to arrive at the maximum number of transactions you may enter during one billing period.

If you have two disk drives:

If S is less than 400, you may enter up to 900 transactions during one billing period. If S is more than 400, then this system will not meet your needs.

Excellent for most small Business applications.

**PRICE: \$300.00**

#### **TITLE: COLOR CALENDAR**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** Got a busy calendar? Organize it with Color Calendar. Whether it's birthdays, appointments, business meetings or a regular office schedule, this program is the perfect way to schedule your activities.

The calendar display is a beautiful HI-RES color graphics calendar of the selected month with each scheduled day highlighted in color. Using the daily schedule, you can review any day of the month and schedule an event or activity in any one of 20 time slots from 8:00 A.M. to 5:30 P.M.

**PRICE: \$29.95**

#### **TITLE: COMPU-LAW (THE LAW OFFICE MANAGEMENT SYSTEM)**

**PUBLISHERS NAME: DECISIONMAKERS, INC.**

**DESCRIPTION:** A completely interactive, fully integrated Law Office Management System, was designed by attorneys for attorneys. The system addresses the real needs of modern law office management, utilizing the world's finest microcomputer combines with the most sophisticated programming methods available.

The key to any successful business is proper billing procedures, prompt payments, smooth paper work flow, and sound organization of all office activities. Compu-Law provides the tools for success.

#### **BILLING**

- \* Billing time reduced from days to hours

- \* Fees calculated either by rate versus time or by flat fee

- \* Up to 36 new entries each month for each case

- \* Date of entry

- \* Two line description of activity

- \* Account of fee or payment

- \* Running balance

- \* Client never receives a bill without explanation

- \* Professional bills automatically addressed and ready for a standard window envelope

**CASE AND MATTER CONTROL**



- \* Status report of every open file in the office
- \* Print out the three most recent services rendered for every file
  - \* Date of service
  - \* Activating attorney
  - \* Two line description of service

#### ALPHABETIZED SUMMARY OF CLIENTS

- \* Summary shows
  - \* Name of client
  - \* Name of matter/case name
  - \* Date of last payment
  - \* Balance due from client
  - \* End of page cumulative total

#### CLIENT LEDGER RECORDS

- \* Full accounts receivable record keeping
- \* Two line description of each entry
- \* All calculations done automatically

#### CRITICAL DATES

- \* Ensures compliance with statute of limitations
- \* Stay current on all files
- \* Reports prepared up to three weeks in advance
- \* Report format varies as Critical Date approaches
- \* Report includes
  - \* Name of client
  - \* Matter/case name
  - \* Name of attorney
  - \* Work to be performed
  - \* Due date

#### OPEN AND CLOSED FILES

- \* Simple way to recognize conflicts of interest
- \* Instant review of open and closed files
- \* Determine whether or not office has represented or opposed any specific client in the past

#### LEGAL MEMORANDA AND FORMS MANAGEMENT

- \* No longer make copies of forms that may not be used again
- \* Have forms available without stocking duplicates

#### COMPUTERIZED EXPANDED ROLODEX

- \* All standard Rolodex information is readily available at the push of a button
- \* Information can be retrieved knowing any fragment, such as three letters in a name

#### ATTORNEY LIBRARY MANAGEMENT

- \* Enables even the busiest office to manage books and supplements

#### SECURITY DISK

- \* Easily add or change attorneys' and paralegals' initials
- \* Quick change of the internal password

#### UTILITIES DISK

- \* Quick and easy preparation of new disks for data

**PRICE: \$2500.00**

#### **TITLE: CONSTRUCTION MATERIAL LIST GENERATOR**

#### **PUBLISHERS NAME: COMPUTERIZED CONSTRUCTION MANAGEMENT SYSTEMS**

**DESCRIPTION:** At last a program that takes all the headache & time out of material estimating on residential and small commercial projects. This program asks for linear feet and square foot dimensions from a set of blueprints & calculates the required material needed to build the project. A great take-off generator. Cuts estimator time in half on this portion of estimating. A complete list from footing to roofing is printed in purchase order form for pricing. Perfection factor's are user adjusted to make the program more accurate as it is used. Worksheets are used for a systematic approach to doing a take-off so omissions are eliminated. Dealer demo's upon request.

**PRICE: \$450.00**

**TITLE: DAYMASTER**

**PUBLISHERS NAME: EXECUTIVE DATA SYSTEMS, INC.**

**DESCRIPTION:** DAYMASTER is a menu-driven system that allows you to create appointment files for any number of months that you choose. You can keep past, current, and future months on one file or you can have separate files for each of these. You can select all days in a month or you can eliminate Saturdays and/or Sundays to save disk space. DAYMASTER allows you to print schedules, one day per page, for a day, week, month, or any other period of time that you choose. Each printed page will have a title of your choosing at the top of the page.

Using DAYMASTER You can schedule up to three people, facilities, of functions, on a single file. If you need to schedule more people or events than this, you can have additional files or you can schedule people on one file and facilities on a separate file. You are completely in charge of establishing the number and types of appointment/schedule files that you need.

Each DAYMASTER file allows you to schedule events or appointments in fifteen minute increments from 8:00 AM until 5:45 PM. For each schedule there are three columns with user-defined headings that can be changed according to what is being scheduled. Under each column headings there is a twenty-character data field to accept any information that you wish to enter. It will hold a name and address or phone number, or it can be used to schedule one or two names of patients who have appointments with a particular doctor or dentist. For appointments lasting more than fifteen minutes, information can be entered on multiple lines for additional detail. If you need to schedule appointments before 8:00 AM, after 5:45 PM, or at other than fifteen minute increments you can simply insert the appropriate time in the data field along with the other descriptive material.

At any time you can add a new month to the file or delete a past month. When a new month is added, the same headings you specified originally are transferred to it. When a past month is deleted, it is written to a history file so that you can retain it for future reference if you wish. As a deleted month is written to the history file, any days for which there are no entries are omitted to conserve file space. At any time you can examine or print the contents of any day in your history file just as you can for your current file.

**PRICE:**

**TITLE: DECISION MASTER**

**PUBLISHERS NAME: SYNTONIC SOFTWARE CORP.**

**DESCRIPTION:** This program lets you use Bayesian theory to peer into the future...even if you've never heard of the Bayes' Rule. It lets you do a complete weighted factor analysis...without knowing what one is. It lets you use discounted cash flow to compare investment alternatives without bothering with present value tables. These and other sophisticated theories that were once the exclusive domain of professors and top business executives are built into Decision Master's algorithms...so you can use them at the touch of a key!

**Features:**

- A documented manual developed by an authority in the field.
- A unique program controlled cross reference system.
- A powerful formatted screen data entry system. You'll use Decision Master in hundreds of routine decisions, as well as more important ones such as:
  - Changing jobs

- Buying a house
- Evaluating insurance policies
- Selecting investment
- Leasing vs. purchasing
- Expanding product lines

**PRICE: \$39.95**

**TITLE: DEPRECIATION/CRITICAL PATH/PROFIT ANALYSIS**

**PUBLISHERS NAME: MPA ENTERPRISES**

**DESCRIPTION:** This program calculates annual depreciation using straight line, sum-of-years digits, or multiple declining balance with the option of switching to S.L. or S.Y.D. at optimal time. Critical path allows a variable maximum number of modes and paths depending on memory size.

Profit analysis graphically portrays the monthly sales, expenses, overhead, and profit for a one year period.

**PRICE: \$50.00**

**TITLE: DISPATCH**

**PUBLISHERS NAME: COMPUTER DISTRIBUTOR**

**DESCRIPTION:** A management tool for any business that has people or vehicles in the field and needs to keep track of their location, movement, and status. Ideal for police, fire departments, burglar alarm companies, ambulance services, TV stations with crews in the field, building contractors, home repair services, etc. Program will monitor up to 24 cars (or people); each is handled by the Apple as one field, and all information for that person is displayed on the screen at one time (location, status, etc). Each file can be updated as more current information is received. The type of call a car/person is on is user designated. Program senses disk-full. A print-out of all activity is available on command.

**PRICE: \$500.00**

**TITLE: EASY FORM**

**PUBLISHERS NAME: GARBO SOFTWARE**

**DESCRIPTION:** Easyform takes the adventure out of typing or filling out ordinary business forms.

**Features Include:**

- \* Easily formatted for different forms
- \* Mathematical calculations
- \* Easy editing
- \* Saves all information on disk
- \* Eliminates ordinary typist problems
- \* Speeds the processing of forms

**Also available:**

Job Cost II, one of the most versatile costing programs available...\$100.00.

Amort, an amortization program for banks and financing companies...\$50.00

**PRICE: \$100.00**

**TITLE: ELECTRONIC PRICE SHEET**

**PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** A sales tool for retailers.

- Adds computerized flash to your retail sales floor.
- Configures your customers' purchases on screen, while they watch.
- Displays your product lines and prices.
- Automatically computes discounts by \$ or %.



-Prints customized price quotes, shows discount savings on screen and printout.  
-Maintains up to 50 product lines, with as many as 99 items per product line.  
-Quick learn tutorial and easy to use set up of program included.  
**PRICE: \$100.00**

**TITLE: EXPLORE AND CHART AUDIENCE  
LISTENING LEVELS**

**PUBLISHERS NAME: MEDIA SERVICE CONCEPTS**

**DESCRIPTION:** There are thousands of numbers inside every ARB book. RECALL helps you find the key data, then translates it for meaningful insights into station and market dynamics.

This sophisticated diagnostic package shows the relationships hidden within the numbers. It helps you organize important information for intelligent decision-making.

You can quickly find strengths and weaknesses in the individual time period dayparts. You will also examine audience flow from one dayparts. You will also examine audience flow from one daypart to another. And you can do the same analyses for your competitors.

For each demographic you can compare up to four stations simultaneously, and you can also compare the same stations's trends for up to four books. Print-outs show percentage differences between stations of books.

The Data Entry programs let you enter key numbers from the ARB book and store them permanently on data disks. You choose stations and demographics.

Throughout RECALL you are asked questions about what you want to do. When you respond you easily move from section to section.

Each analysis can be viewed as a set of tables of as color bar graphs on your TV monitor. With a printer you can permanently save all of the results in hard-copy form.

**FEATURES:**

\* Time Spent Listening - The number of quarter-hours that the "average" person spends listening to each time period.

\* Exclusive Cume Analysis - The number and percent of a station's exclusive cume, for Total Week and four major Weekday Dayparts.

\* Quarter-Hour Distribution - Looks at where the total number of quarter-hours that a station accumulates each week are distributed.

\* Audience Turnover - For each time period, the number of different groups of people that contribute to the station's average audience.

\* Cume Percent Reached - The percentage of the total Monday-Sunday weekly cume that each daypart reaches. Another recyling measurement.

\* Cume/AQH/TSL Comparison - Simultaneous comparison to show how Time Spent Listening can bring Average Quarter-Hour differences for milar Cumes.

\* Hour-by-Hour Profile - Shows the hour-by-hour audience size. Colorful graphic display provides a perspective that is easy to understand.

\* Quick-Reach. A quick audience reach and frequency estimate of how many times the "average" listener will hear a programming element.

\* Audience Error Estimates - Shows the probable margin of error for audience estimates, based on Arbitron's current formulas.

\* PPDV Analysis - Calculates the approximate Persons Per Diary Value of the unweighted Arbitron sample. Actual PPDV values may differ each time.

\* Station-to-Market Efficiency - Illustrates the efficiency of station in reaching its targeted audience. Compares Time Spent



Listening data.

\*Data Summary Tables - Allows you to recall data from the ARB book that was previously used in station and market ratings analyses.

PRICE: \$750.00

**TITLE: FINANCE I**

**PUBLISHERS NAME: MPA ENTERPRISES**

DESCRIPTION: Calculates: future value, present value of future sum, annuities, payment for future annuities, effective interest rate, annuity due, present value of annuities, simple mortgage payments, monthly mortgage tabulations, and time to pay-off mortgage.

PRICE: \$25.00

**TITLE: FINANCIAL MANAGEMENT SYSTEM II**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

DESCRIPTION: A FAST, EASY-TO-USE ACCOUNTING SYSTEM DESIGNED FOR HOME AND SMALL BUSINESS ACCOUNTING

"CHECK WRITER II" included in this package!

OBJECTIVE: Enter an entire month's checking, charge card, and cash accounts in just a few minutes using your own personalized macro lists. Instant error correction on all entries. Audit all files by Code and month.

Powerful new BUDGET MANAGER for planning and comparing budget with audits. Printer routines for listing disk files, balance, reconcile, search, macro lists, audit and budget reports.

ACCOUNT MANAGER: A self-prompting, error avoiding entry system which includes disk files, balance, reconcile, edit, and sort.

BUDGET MANAGER: Plan, review and balance your budget. Then generate complete reports with summation for any 1-12 month period.

SYSTEM UTILITY: Enter your own item and tax Code Macros, up to 100 each. Configure program to match almost any printer/disk system.

SEARCH RECORDS: Search for any given data. Make specific and expanded searches using the Macro lists.

ACCOUNT AUDITOR: Totals all files by tax Code and any 1-12 month period with year-to-date totals. Perfect for your Tax Accountant.

CHECK WRITER II: Select and automatically print checks from your files. Use standard or personalized format.

PRICE: \$64.95

**TITLE: INSURANCE BROKING SYSTEM**

**PUBLISHERS NAME: PADMEDE COMPUTER SERVICES**

DESCRIPTION:

\* 999 Client Ledger Credit Accounts

\* 3300 Postings can be maintained on the Client Ledger using open-item method

\* 1000 Cover Debit Notes/others may be produced each month for addition to the ledger.

\* Insurer Ledger holds 99 Credit Accounts with up to 3300 Postings being maintained 'open-time'

\* Access to Clients'/Underwriter's Names and Addresses, Terms of Credit etc, from the appropriate Ledger is available at time of input

\* At end of each Accounting period all files are updated from the Monthly Files

\* Cash/Credit Notes are allocated against Debit Notes on Ledger Accounts

- \* Full interrogation via screen
- \* Renewals File Can be updated with this month's Files
- \* Comprehensive verification of input

#### REPORTS:

Statements of Account to Credit Clients; Remittance Advice Notes to Insurers; Accounts Payable Listing; Accounts Receivable Listing; Audit Trail; Alphabetic List of Clients; List of Cash Received; Transaction Listings (insurer and Client); Renewals List

#### PRICE:

#### TITLE: LEGAL CLERK

PUBLISHERS NAME: MONUMENT COMPUTER SERVICE

HARDWARE REQUIREMENTS: Two disk drives, and 130 column printer

DESCRIPTION: According to most legal journals, the trend of the 80's is toward computerizing the attorney's office. No longer does the legal secretary, clerk, or bookkeeper have to spend hours scheduling appointments or calculating the attorney's billing fees.

With an Apple II Computer and the "Legal Clerk", accounts can be kept current, court appointments made easier to schedule, and third party billing can easily be figured.

PRICE: \$695.00

\$ 50.00 manual available separately

#### TITLE: LIFEALC

PUBLISHERS NAME: VERNON TECH CORP.

DESCRIPTION: An extensive series of Visicalc models producing in excess of 100 different life insurance proposals. May be purchased as a package or in modules:

PRICE:	Apple II	Apple III
Ledgers	\$500.00	\$500.00
Minimum Deposit & Blending	750.00	750.00
Illustrations		
Split Dollar Illustrations	500.00	500.00
Annuity Illustrations	250.00	250.00
Executive Bonus Illustrations	250.00	250.00
All Modules	1,900.00	1,900.00

#### TITLE: MANNA

PUBLISHERS NAME: BOURNE & CO.

DESCRIPTION: The responsibility of your church to its members is constantly growing and changing because today's families are growing, moving, and changing. Reliable church membership and giving records are a must for the church that is as dynamic as its membership. The work involved in organizing and maintaining your record system has been an overwhelming task until now. The development of MANNA has enabled churches of all sizes to efficiently and economically keep current information on its membership and gifts and have it available at all times right in their office.

All that is required is the affordable Apple II-Plus computer and the MANNA menu-driven software package. The operating manual is written to be self-instructing with pictures of the actual computer screen. Most importantly, help, support and maintenance is provided by your local Apple dealer who is only a telephone call away. Easy user customizing allows applications for all denominations and faiths. This system will permanently be in your church office and provide current information on your membership and gifts anytime you desire, all at a very affordable price.

**Membership-** Maintains detail information on every family and member on file for updating and produces weekly and monthly complete member rolls; new member profiles; church directory and monthly admissions and deletion reports. Information on each member can be viewed on the computer screen or printed.

**Profile-** Allows the unique selection of members by a wide variety of Profile Codes; from activities to blood types to visitations to interests and more. Each church can define their own area of interests, activities, etc., to meet their individual needs. Any combination can also produce pressure sensitive mailing labels or a complete printout. The potential is endless both in applications and use.

**Sunday School-** Records individual class rolls; weekly activity reports; weekly attendance; complete control, transfer and delete capabilities. Prints weekly class roll for marking attendance. The time-saving method for recording attendance is completed quickly by a simple answer of yes or no when the member's name is shown on the computer screen.

**Giving-** Accounts financially for all receipts by members or non-members on a weekly basis; maintains individual records and prints a monthly, quarterly and yearly giving statement for all gifts by regular and many special categories. Gift amounts may be changed at anytime if incorrect. The program allows for slow or fast input of gifts in ANY order and also provides an easy-to-follow audit trail or close-out procedure.

**Analysis-** Supplies printed up-to-date statistical reports on the number of members by givers; Sunday School attendance; families; marital status and aging of the membership. Also, it reports the total contributions by month; analysis of pledges vs. receipts vs. budget for assistance in financial management and planning. A bar graph showing total contribution by month is printed and lastly, a receipts analysis showing the number of givers and the range of gifts in the church. A complete statistical analysis of the strategic elements of a church can be produced daily. Total current printed information in a very understandable form is now available at the push of a button.

MANNA allows all churches to now have their own computer system. The complete system, Apple computer, printer, two disk drives plus MANNA software sells at the suggested retail price of \$5,995 or is available on a 36 or 60 month lease, with option to purchase, through your local Apple dealer. Of course, a church may also choose to add "Apple Writer", which is a comprehensive word processing program, and Apple's "The Controller" for a total financial accounting package. MANNA is for small congregations up to congregations numbering in the thousands. MANNA is the lowest cost computer system available to churches today without sacrificing any quality or features. The complete system was designed with cost in mind, as well as, easy operator usage. No other program offers the wide-spread features found in MANNA. Your local Apple dealer will guide you through the learning steps and stands ready to make any necessary repairs to keep your system fully operational. In many churches, the cost is so affordable, they are choosing to purchase one or more systems to be used in accounting, membership and other areas in their church.

With MANNA you will always have a current...

\* Membership Directory

\* Membership Profile



- \* Member Interest File
- \* Sunday School Record
- \* Sunday School Activity Report
- \* Individual Giving Statements
- \* Address Labels
- \* Receipts vs. Budget Analysis

The possibilities are endless because MANNA is programmed to meet the unique needs of your Church.

PRICE: \$5995.00

**TITLE: MANUFACTURING COST ESTIMATE**

**PUBLISHERS NAME: CENTEC PROCESS SYSTEMS**

**DESCRIPTION:** Designed for manufacturing, engineering, consulting and analytical applications. MCE can be used to estimate fixed and variable manufacturing costs based on individual specifications for labor, utilities and raw materials. The program produces up-to-date cost listings for inclusion directly in reports.

PRICE: \$75.00

**TITLE: MONEY MANAGEMENT ASSESSMENT SERIES**

**PUBLISHERS NAME: INTERPRETIVE EDUCATION**

**DESCRIPTION:** This program assesses the basic skills needed to learn money management concepts and functions. When used for pre and post testing the result will assist the teacher in the implementation and evaluation of money management programs.

PRICE: 4 Disks \$165.00

**TITLE: MULTI-MESSAGE AD**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** A program to allow the APPLE computer to serve as an automated ad machine is now available in INTEGER BASIC on disc. The program, called "MULTI-MESSAGE WITH INTERLEAVED COLOR PATTERNS", allows entry of up to 10 messages of 239 characters each.

The characters are very visible, blue-tinted hi-res letters. They are 1/8 screen height x 28/line x 4 lines/page, and "puff" occur when a screen page is filled. Lo-res kaleidoscope or abstract art patterns can be interposed between messages, at user option.

Up to 40 groups of 10 messages with associated color patterns may be stored on the program disc. The program can be used by unskilled persons for instant ads in shop windows, counter displays, trade-show booths, physicians waiting rooms, and for teleprompting in broadcast stations. If multiple TV/monitors are connected to one APPLE, the ad effectiveness is increased.

PRICE: \$35.00

**TITLE: OFFICE MANAGER**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS: Two disk drives.**

**DESCRIPTION:** The Office Manager is a complete client scheduling and staff appointment system. The system can be used by almost any profession in need of time scheduling for its personnel. The package allows the system to register clients or active job assignments and schedule activities for these clients or work by staff.

The system allows the daily scheduling of appointments and work assignments, the preparation of appointment reminders for clients of staff, the preparation of daily calendars, and the printing of



appointment reminder phone lists. The doctor, dentist, accountant, lawyer, beauty shop owner or business receptionist can easily keep up to 12 months of appointments on a single diskette. The system has a capacity well in excess of 19,000 future time slots and these can be preformatted to allow for vacations, holidays and other scheduled non-work days.  
**PRICE: \$99.95 disk and operating manual**  
**\$25.00 manual**

**TITLE: OIL AND GAS COMPANION**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**HARDWARE REQUIREMENTS: 2 disk drive; parallel/serial acceptable 132 column printer**

**DESCRIPTION: Automates joint interest billing and revenue distribution.**

**PRICE:**

**TITLE: ORDER ENTRY**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION: If you find that you need a system which can handle documentation and control of both PURCHASE ORDERS and SALES ORDERS;**

If you need to have your accounts payable, accounts receivable and inventory control records automatically updated and documented to reflect sales and purchase order activity;

If you need an affordable system;

then ORDER ENTRY may be what you've been waiting for.

Many small and medium sized companies have previously been unable to purchase computerized order entry systems such as those used by Fortune 500 companies because of high prices ranging into the thousands of dollars.

CompuMax can now offer you a comprehensive order entry system at an affordable price.

ORDER ENTRY will handle PURCHASE ORDER functions using programs which can:

Generate and print purchase orders in mailable format.

Compute tax on taxable P.O.'s.

Organize purchase order records by record number and/or by vendor.

Register deliveries against outstanding P.O.'s.

Register payments against outstanding P.O.'s.

Interact with the CompuMax Inventory Control System to update its records.

Print new copies of purchase orders for outstanding P.O.'s.

Provide purchase order history reports for individual vendors or all vendors.

ORDER ENTRY handles SALES ORDER/INVOICE functions using programs which can:

Generate and print sales orders and invoices in mailable format.

Compute tax on taxable S.O.'s.

Organize sales order records by record number and/or by customer.

Register shipments on your outstanding sales orders.

Interact with the CompuMax Accounts Receivable System to update its records.

Interact with the CompuMax Inventory Control System to update its records.

Print new invoices for outstanding sales orders.

Provide sales order history reports for individual customers or for all customers.

**PRICE:**

**TITLE: PDP-PROGRAM DIRECTOR'S PLANNER PACKAGE****PUBLISHERS NAME: MEDIA SERVICE CONCEPTS****DESCRIPTION:** "REACH OUT" lets you plan your programming schedules for maximum effectiveness.

'CLOCK HOUR' is a color graphic clock hour wheel planner.

**"DJ SHIFTS"** makes your air shift scheduling problem easier.**"TIME TRACKER"** quickly adds minutes and seconds to make things come out on time.

With the PDP Package you can apply your station's reach and frequency information to guide you to maximum effectiveness in scheduling current music, station promos, PSA's, and features.

A color graphic clock hour wheel lets you try out any number of combinations to plan the "perfect" mix of ingredients.

Other scheduling problems? The PDP will analyze air shifts, compute time for newscasts or specials, and help keep track of information for license renewals.

**PRICE:****TITLE: PHONE DIRECTORY****PUBLISHERS NAME: VIDEO WORLD****DESCRIPTION:** This program stores, on disk, a large phone list of your customers or employees or anyone you want. You can recall any one name by person's name or company name. The inputs to the file are Name, Company, Phone No., and Extension. We can add more entries if you wish to any file. The fields lengths and Name:(30), Company: (30), Phone No.: (12) as 309 686-9352, Extension:(4). The program will print out a phone list of all entries in the file with their company and phone no.**PRICE: \$70.00****TITLE: PRACTICAL BASIC PROGRAMS****PUBLISHERS NAME: HIGH TECHNOLOGY, INC.****DESCRIPTION:** Another 40 BASIC programs from Osborne/McGraw Hill's book, Practical Basic Programs is also available on diskette for the Apple computer. Programs deal with subjects as varied as decision analysis, checkbook analysis, checkbook reconciliation, statistical techniques, and federal tax form preparation. The book, which is included along with the diskette, presents each program with a description, sample run, practical problems and a BASIC source listing.**PRICE: \$40.00****TITLE: PROFESSIONAL TIME & BILLING****PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS****HARDWARE REQUIREMENTS: Printer and two disk drives****DESCRIPTION: EVERY MINUTE COUNTS.**

When you charge for time, every minute counts. Counting up the charges, determining accountability for your services, making billing decisions - your livelihood depends on these tasks. Time itself and the cost you assign to it - are the real commodities of the professional practitioner.

**PERFORMS LIKE A SERVICE BUREAU.**

The Professional Time &amp; Billing program performs time management and billing functions as expertly, efficiently and smoothly as a prestigious service bureau but at fraction of the cost! With the PTB program, turnaround time is virtually eliminated. Instant access to information and the ability to make quick, effective billing decisions are virtually at your fingertips. With delays eliminated, your cash flow will increase significantly.

**DESIGNED BY PROFESSIONALS.**

The Professional Time &amp; Billing program by SOFTWARE TECHNOLOGY

**BUS-82**

for COMPUTERS was designed by professionals who understand that time is money. Their purpose in creating this program is to give you the best possible return on your time.

PTB WILL HELP YOUR FIRM.

The PTB program will keep accurate records of WHICH staff member performed WHAT work for WHICH client. Up to 120 user-defined rate codes of time, expenses or fixed fees can be used. Even nonbillable work and non-time-related expenses can be recorded. The program provides accurate records of monies received from clients on account or other receipts you may want to record. The PTB program will correlate all this information, assemble comprehensive set of internal reports, and generate statements for services rendered.

PRICE: \$395.00

**TITLE: PROFESSIONAL TIMEKEEPING SYSTEM**

**PUBLISHERS NAME: COMPUTER CONSULTING SERVICES**

**HARDWARE REQUIREMENTS: dual disk drives and printer**

**DESCRIPTION:** The system programs reside on two main disks:

- \* the Master disk
- \* the Utilities disk

**THE FUNCTIONS OF THE MASTER:**

- complete monthly client financial summaries printed
- prints an activity analyses for the entire firm
- billing (pre-, regular, re-)
- edits data files
- single client financial summaries printed
- change today's date
- data entry
- print data files
- print activities analyses - single professional
- edit professional summary files
- generate complete monthly client financial summaries

**THE FUNCTIONS OF THE UTILITY:**

- change today's date
- parameter files edited
- clients backup data disks
- print client data disk directories
- data file maintenance:
  - disk-to-disk transfer of client files
  - delete client files
  - re-start (compress) client files
- initialize client data disks

**CAPACITIES:**

Client file size.....150 records  
Number of professionals.....25  
Number of data entries per disk.....approx. 1600  
Number of clients per disk.....40  
Number of clients (entire System).....UNLIMITED  
Number of work type codes.....20

PRICE: \$1500.00

**TITLE: PROJECT BOSS**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Project Boss allows you to be the low bidder and still make some money. The program is a complete project manager's cost control system. You can use it to prepare the bid, to set up the project budget, to post your actual costs, to estimate the costs necessary for job completion and print out a series of job control reports. The reports are complete enough for all project management activities and can be used in the preparation of invoices and statements.



**PRICE: \$94.95**

**TITLE: PROJECT MANAGEMENT GROUP**

**PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: CRITICAL PATH ANALYSIS**

This program analyzes a project planning network. It determines the critical path and calculates free and total floats associated with each activity. It also tells the IE the earliest and latest start times for each activity.

**PROGRAM 2: PROGRAM EVALUATION AND REVIEW TECHNIQUE (PERT)**

This network analysis technique considers an activity in which each activity time is described by three estimates. The program then calculates an estimate of the mean and variance of the time to reach each node of the network. The analyst can then specify a scheduled completion time for his project and the program will estimate the probability that he can meet the specified schedule.

**PROGRAM 3: RESOURCE ALLOCATION**

This program is a project scheduling routine which in addition to taking into account the activity time, will also consider the effect of limited resources on the schedule. Each activity specifies the number of units of resource needed. The program does not give optimum results although the solution will improve with additional iterations of the COMSOAL technique.

**PROGRAM 4: ACTIVITY ON NODE NETWORK ANALYSIS**

This program calculates the critical path, earliest and latest start times and appropriate floats for a project management system described with the time consuming elements represented by nodes.

**PRICE:**

**TITLE: PROJECT PLANNING**

**PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**DESCRIPTION:** This program aids the consultant, engineer, contractor, and any other professional in keeping track of the budget, bid costs and estimation completion costs and time of projects.

**PRICE: \$95.00**

**TITLE: PROJECT SCHEDULE ANALYSIS I**

**PUBLISHERS NAME: EXPRESS MARKETING**

**DESCRIPTION:** A cassette-based introduction to computer-aided scheduling for the Apple II computers with floating point Basic and at least 16K of memory. PSA/1 uses critical-path scheduling techniques similar to those used by NASA for the U.S. space program.

PSA/1 computes schedules for each job within a project; these schedules show how early each job can be started, how early it can be finished and the latest each job can be started and finished and still meet a project deadline. Schedules also show how long each job can be delayed without affecting other jobs. Once defined, projects can be named and their data stored on tape for later analysis. Flexibility is enhanced by allowing you to specify any time unit (hours, days, weeks) desired for tracking the project.

Schedule results are displayed on the video monitor, and printed reports can be produced if you have a line printer capable of printing 80 columns or more. Apple owners must provide their own printer driver routines at locations indicated in the software.



The accompanying User Manual provides over 50 pages of information including how to define project networks, how to make time estimates and how to operate each of the six functions in the PSA/1 to such applications as building a house, planning a new product and preparing a gourmet dinner. The PSA/1 package consists of the program cassette and User Manual.

**PRICE: \$25.00**

**TITLE: QUIKDIRT - PRODUCTION SCHEDULING**

**PUBLISHERS NAME: WYMAN ASSOCIATES**

**DESCRIPTION:** In a production shop, the foreman needs to prioritize jobs into a schedule. Various factors have to be considered to come up with a satisfactory schedule. You can maximize throughput (rates of jobs completed), but you also have to be concerned about customer priorities, time left until jobs are late, minimizing the number of late jobs, and watching out for the worst case of job lateness.

This production scheduling package can help you learn more about and improve your scheduling procedures, predict completion times, and in general provide a more formal method for straightening out shop scheduling problems.

Each job can be thought of as requiring one or more "processes". A process normally occupies one machine or one specific person. For example, milling, grinding, polishing, and packaging could be considered processes. This package allows you to trade off the maximum number of jobs and processes (e.g. you could have 5 jobs and 300 processes, or 300 jobs and 5 processes).

By the way, you don't have to be a manufacturer to use production scheduling. Every production center from a typing pool to graphics designers to attorneys have jobs and due dates to meet. This package can help each case.

**PRICE: \$120.00**

**TITLE: QUIKDIRT - TRANSPORTATION PLANNING**

**PUBLISHERS NAME: WYMAN ASSOCIATES**

**DESCRIPTION:** This program allows you to determine a least-cost pattern of shipments that will get required quantities from sources to destinations, keeping supply and demand in balance. It can also be used for several kinds of assignment problems such as the need to determine a least cost pattern of assigning trucks to routes, drivers to shifts, and routes to shifts.

It is possible to have up to 3000 source-destination combinations. This will allow 20 sources and 150 destinations, for example. Inputs include the amounts of supply and demand at each source and destination (respectively), and the per-unit cost of each source-destination shipping mode. Outputs include the optimal shipments (source, destination, amounts) and total budget.

**PRICE:**

**TITLE: RECALL - (THE ARBITRON ANALYSIS PACKAGE)**

**PUBLISHERS NAME: MEDIA SERVICE CONCEPTS**

**DESCRIPTION:** "Mutual Exclusive" is a cume analysis system to explore patterns of listening behavior.

"QUARTER-HOUR" lets you see which day parts are strongest.

"TRENDS" paints a graphic picture of station and competitor trends and projections.

'MAINTENANCE' examines listening patterns and compares several stations.

"PEEK-A-BOOK" looks at ARB'S sample and generates guidelines for

interpreting your ratings.

"EFFICIENCY" tracks hour-by-hour listening for a station and the market.

There are thousands of numbers inside every ARB book. RECALL helps you find the key data, then translates it for meaningful insights into station and market dynamics.

This sophisticated diagnostic package shows the relationships hidden within the numbers. It examines cumes and quarter-hours, illustrates trends and projections, and tracks the hour-by-hour positioning of your station.

An important feature is the ability to look at Abitron's final sample to calculate the margin of error for their audience estimates. You will also see such useful information as Time Spent Listening and Audience Turnover.

**PRICE:**

**TITLE: RETAIL MANAGER**

**PUBLISHERS NAME: ADVANCED BUSINESS TECHNOLOGY, INC.**

**HARDWARE REQUIREMENTS: Paper Tiger IDS 440, 460G, Anadex 9501 or Epson MX-80 printer with graphics.**

**DESCRIPTION: Features:**

- Supports ABT BarWand and enables barcode printing
- Tracks 1200 items of inventory on each 5-1/4" disk
- Prints invoices and contract invoices
- Records petty cash paid out
- Charge and contract sales
- Taxable and nontaxable sales
- Automatic reorder/backorder
- Support ABT CashBox cash register drawer
- Maintains layaways and advances
- Documents unusual contracts
- Separate flooring maintenance
- Supports coded price tag data
- Price adjustments by product codes
- 10 departments- 10 codes

**PRICE: \$295.00**

**TITLE: ROUTEPLANNER**

**PUBLISHERS NAME: COLUMBIA SOFTWARE**

**DESCRIPTION:** Designed for the Apple II personal computer, ROUTEPLANNER will help anyone who plans business and sales trips, pick-up and delivery routes, van pools, transit routes or other trips containing multiple stops. ROUTEPLANNER accepts up to 21 route stops whose map coordinates are obtained from most city, state or national maps. After optional route adjustments are made, ROUTEPLANNER computes the order of stops and approximate distance for the SHORTEST TRIP.

The disk also contains a DATA BASE program which can store map locations of up to 400 accounts, streets, cities, etc. This eliminates the need to continuously refer to maps when entering data into ROUTEPLANNER.

Users of ROUTEPLANNER can save considerable time planning routes. Since the shortest route is computed, total mileage placed on vehicles and drivers is kept to a minimum.

ROUTEPLANNER is easy to use. It can be mastered in a few hours by almost anyone who knows how to use maps.

**PRICE: \$149.00**

**TITLE: SHOULD YOU INCORPORATE?**

**PUBLISHERS NAME: VERNON TECH CORP.**

**DESCRIPTION:** Enables the life insurance professional, financial

planner, attorney or accountant to quickly determine the financial wisdom of incorporation for the unincorporated client. Screen display enables user to quickly evaluate situation and make changes with taxes, Social Security and other variables instantaneously recalculated. When appropriate situation is displayed, user may then print-out results.

PRICE: \$155.00

**TITLE: SOME COMMON BASIC PROGRAMS**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** The entire collection of seventy-six programs featured in the book Some Common Basic Programs by Osborne/McGraw Hill is now available on diskette for the Apple II. The book is included with the diskette. For ease of use the programs have been separated into four categories: Business, Mathematics, Statistics, and Miscellaneous.

PRICE: \$40.00

**TITLE: THE AGENCY DATA MANAGEMENT SYSTEM**

**PUBLISHERS NAME: VERNON TECH CORP.**

**DESCRIPTION:** A series of agency data management models developed for use by life insurance agents to assist in client record-keeping, application and underwriting tracking, year-to-date production statistics and broker mailing list management. Includes PFS and PFS: REPORT.

PRICE: Apple II Version...\$260.00

Apple III Version..\$360.00

**TITLE: THE BUDGETEER**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**HARDWARE REQUIREMENTS:** 2 disk drive; parallel/serial acceptable 132 column printer

**DESCRIPTION:** For personal or small business use, this financial package provides budgeting and actual to budget comparison of expenditures. Multiple accounts or multiple departments are supported. Written under the Tool, this package is mostly in machine language, and runs on Corvus or floppy disk.

PRICE:

**TITLE: THE DEACON-CHURCH MEMBERSHIP SYSTEM**

**PUBLISHERS NAME: SCOTT FORESMAN & CO. ELECTRONICS PUB.**

**DESCRIPTION:** Provides a church or parish with the capability to store data on each family unit and on individual members; to prepare member and family profiles, summaries, and lists; to print twenty-six different directories, rosters, and checklists; and to print mailing lists and labels selected or sorted in a variety of ways.

**PROCEDURES:**

- \* Data Disks are copied to ensure adequate backup for data
- \* Family and Person data for each family and individual in the church membership are entered.
- \* Church Activities Data for each church activity in which members participate or desire to participate are entered.
- \* Reports and Mailing Labels are printed after the data are entered and whenever membership information or labels are desired.

**REPORTS:**

- \* Family and Member Directories
- \* Member Data Reports
- \* Family and Member Checklists

\* Adult Data Reports  
\* Child/Youth Data Reports  
\* Mailing Lists and Labels  
PRICE: \$4000.00

**TITLE: THE ESTIMATOR**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**HARDWARE REQUIREMENTS: 3 disk drive; parallel/serial acceptable  
132 column printer**

**DESCRIPTION:** This is a general purpose estimating product suitable for any repetitive unit cost estimating. Businesses such as construction contracting and manufacturing can use this software package to reduce estimating time substantially while producing more accurate estimates. Each estimate may consist of up to 400 cost items derived from up to 400 resource categories, all definable by the user and stored on diskette for repetitive use.

**PRICE:**

**TITLE: THE INVOICE FACTORY**

**PUBLISHERS NAME: MICRO LAB**

**HARDWARE REQUIREMENTS: two disk drives**

**DESCRIPTION:** Generates statements, aged receivable reports, product or customer reports, sales analyses by product in graph or report form, and much more. Use a new free form, automatic, in addition to the standard invoice format for added flexibility. Product descriptions along with various charges may be included on an invoice.

**PRICE: \$200.00**

**TITLE: THE LIFE INSURANCE CLIENT MANAGEMENT SYSTEM**

**PUBLISHERS NAME: LIFE PLAN ANALYSTS**

**HARDWARE REQUIREMENTS: 2 Disks Drives**

**DESCRIPTION:** A Turnkey Data Base System designed by a Life Insurance Professional FOR Life Insurance Professionals - SAVES 2 to 5 Hours Monthly!

**ALLOWS YOU TO:**

- Add Clients
- See Client Info on monitor
- Print out all clients
- Print out by month of birth
- Print out by zip code
- Correct records
- Delete Records
- Print mail Labels for all clients
- Print mail labels by month of birth
- Print mail labels by zip code
- Build new files

Supplied with one program disk and two initialized client storage diskettes.

When ordering, indicate slot # for printer.

**PRICE: \$85.00**

**TITLE: THE PRICE QUOTER**

**PUBLISHERS NAME: SHANALI, INC.**

**HARDWARE REQUIREMENTS: 2 Disk drives**

**DESCRIPTION:** Create and maintain Price Lists, Invoices, Orders, Price Quotes

**ADDITIONS TO PRICE LISTS**

You can enter up to 750 different items per list diskette, each



item with the following information:

- \* item/model
- \* main category
- \* sub-category
- \* supplier code
- \* unit cost
- \* selling price
- \* delivery information
- \* unit division
- \* description

You can use an unlimited number of list diskettes with the Price Quoter.

#### PRINTING MENU

This menu gives you the options to:

- \* print an updated price list by category or supplier
- \* print a complete supplier list with name, contact, address and telephone

#### CLEANING HOUSE

A periodic cleaning house program compacts lists, and establishes an efficient order for running all Price Quoter programs.

#### CATEGORY FILE MAINTENANCE

Here you can make changes in you categories and sub-categories (i.e. when you add a new line or new product):

- \* print categories
- \* add categories
- \* view categories
- \* change categories
- \* add sub-categories
- \* delete categories
- \* delete sub-categories

#### SUPPLIER FILE MAINTENANCE

Here you can make changes in your supplier files (i.e. when a supplier moves) quickly and easily:

- \* company name
- \* personal contact
- \* address \* city
- \* state \* zip
- \* telephone \* code

#### PRICE QUOTING

Looking Up Item Information Preparing Quotes

The heart of the program. Create custom quotations. Change them as often as you wish. Save them. Recall them. Print them.

- \* view items desired on your price list, by category, sub category or supplier
- \* see quotes already on file, which can then be altered
- \* prepare a new quotation, which can be saved
- \* print a custom quote, invoice or order
- \* change quotes as to discounts, quantity or price changes...and then view altered quote

#### QUICK QUOTE

Prepare a fast quote- save time- when you know the Quick Quote numbers of the items you wish found on the price list! Great for outside sales people calling in for quick quotes!

#### PREPARE NEW LIST DISKETTE

In addition to initializing a diskette, you have four major choices or any combination of them:

- \* set up all new categories
- \* set up all new suppliers
- \* use old categories
- \* use old suppliers

Or any combination. You can use the same suppliers but set up new categories! Whatever you wish!

#### CHANGES TO YOUR PRICE LIST

Here is where you update prices (authorized personnel only) and

delete items:  
\* item/model  
\* main category  
\* sub-category  
\* supplier code  
\* unit cost  
\* selling price  
\* delivery information  
\* unit division  
\* description

#### SECURITY

Management can assign one of three major codes: those people authorized to enter and alter items on a price list; those authorized to view costs- and those who can't. Codes can be changed only by management. Separate security envelope must be opened by owner.

THE PRICE QUOTER is ideal for any business with more than 50 different products or items on their line. Highly recommended for retailers, distributors, wholesalers, printers, supply houses, jobbers, manufacturers...anyone who needs up to date price lists.

#### PRICE:

**TITLE: THE PRINTER'S ESTIMATOR**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**HARDWARE REQUIREMENTS: parallel/serial acceptable 132 column printer.**

**DESCRIPTION:** We believe this is the most advanced software package for print estimating available for any computer at any price. All aspects of the printing process are included in this highly automated estimating system. From pre-press, camera and layout, paper selection, varnish, ink coverage, and press work, through cutting, machining binding, and packaging the finished product, it is all accounted for in the estimate you can create. This product was designed to exceed the stringent requirements of America's most highly respected printers. Estimates can be more accurate in one tenth the time of manual methods.

#### PRICE:

**TITLE: THE STEWARD - CHURCH CONTRIBUTION SYSTEM**

**PUBLISHERS NAME: WILSON JONES**

**DESCRIPTION:** Provides your church or parish with the ability to record and store contributor data including the amount of contributions and/or pledges by fund; to enter, post and summarize weekly contributions of individuals; to analyze the contribution and pledge patterns of individuals; and to print a variety of useful reports. Records can be kept for up to 2,000 individual contributors on one pair of data disks. They may be entered individually or produced as a by-product of the companion DEACON system.

#### PROCEDURES:

- \* Church Year, Fund and contributor data are entered to establish records.
- \* Weekly Contributions for the specific contributions made by members are entered and posted.
- \* Reports are printed after data are entered; and weekly, monthly, quarterly, or yearly as desired.
- \* Data disk are copied to ensure adequate back-up for data.

#### REPORTS:

- \* Contributor Listing
- \* Weekly Contribution Edit List
- \* Members Contribution Report
- \* Church Contribution Summary

- \* Pledge to Contribution Analysis
  - \* Statement of Contributions
  - \* Annual Contribution Analysis
- PRICE: \$4000.00

**TITLE: THE TRUSTEE - CHURCH FINANCE SYSTEM**

**PUBLISHERS NAME: WILSON JONES**

**HARDWARE REQUIREMENTS: two disk drives, printer**

**DESCRIPTION:** Designed to provide a church or parish with the ability to account for income receipts and expenditure payments; to monitor income and expenditure budgets monthly and annually; to keep records of specific transactions, accounts and vendors; to print a variety of useful management reports and to print checks. Records can be kept for up to 400 accounts, 500 vendors, and 1500 monthly transactions (payments, receipts, and journal entries) on one pair of data disks.

**PROCEDURES:**

- \* Account Data for each account including account code and description, last year's actual and the budget amounts are entered.
- \* Vendor Data including the name and address for each vendor with which you do business are entered.
- \* Receipts, Expenditure and Journal Entry data are entered on a continuous basis.
- \* Reports are printed after data are entered, and monthly and annually thereafter.
- \* End-of-Month and End-of-Year processes are run to post and summarize data.

**REPORTS:**

- \* Chart of Accounts
- \* Vendor List
- \* Transaction Reports
- \* Check and Receipt Registers
- \* General Fund Budget Worksheet
- \* Monthly General Ledger
- \* Statement of Income/Expense
- \* Balance Sheet

PRICE: \$4000.00

**TITLE: THE ULTRA PLOT/DIF DATAGRAPH**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** If you've wanted a system that allows your computer to create outstanding business graphics from your DIF files, look no further. Avant-Garde now can connect the great filemaking abilities of DIF (Data Interchange Format) to its own Ultra Plot Business Graphics System with DIF Interface.

This means you can quickly and easily turn your DIF file data into hi-res color pictures: Bar Charts, Line Graphs, Scatter Graphs, Pie Charts, Hi-Low Charts, Stacked Charts, and even MAP CHARTS, unique to all Apple plotting packages!

So, if you're already using a database such as Visicalc, Visifile, DB Master, or any other programs that create DIF files, the DataGraph package is for you!

Put DataGraph to work for you -

While these systems (Ultra Plot and Ultra Plot/DIF/Interface) are available separately, we believe that together as DataGraph they become one of the finest graphics/datafile combinations available on the market today.

Here are only a few of the programs DIF/DataGraph offers:

- \* Search/Select/Sort your DIF files...Total and/or average any number of fields quickly, and rangesort up to 9 fields
- \* Relegate data into categories by state, then create 5-color

Map Charts to depict relevant data (such as sales trends)- invaluable in corporate planning and sales analysis

- \* Match data for any field or partial field...and much, much more!

Optional concomitant selection criteria may be used in all of the above to pinpoint precisely the information you want.

With Ultra Plot/DIF/Datagraph you'll be able to search your files one minute, then in seconds actually create a clear graphic representation of this data. You can also overlay graphs and charts to produce desired effects. And DataGraph does it all easily, accurately and quickly.

Ultra Plot supported by a special disk that conveniently interfaces with Complete Mailing Label & Filing System. With this utility no data input is needed as the utility searches the mailing files to create Ultra Plot graphic/data files.

The Ultra Plot/DIF/Interface

Even without Ultra Plot this interface will allow you to do exhaustive searches, range-sorts, data matches, totalling, averaging, etc. (as described above) on your DIF files. But, of course, its optimum value is reached when connected to Ultra Plot...to give you an outstanding business graphics system you can grow with!

**PRICE: \$34.95 Interface available separately**

**\$99.00 Ultra Plot/DIF/Data Graph**

#### **TITLE: THE UNDERWRITER**

#### **PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** The skyrocketing costs of insurance coupled with the increased costs of writing client policies has prompted a need for efficiency in the field of insurance underwriting. Over the last several years the insurance business as a whole has discovered the advantages of computerization.

Until recently, only the larger insurance companies were using coverage, changes in regulations, and to handle the never ending mound of insurance paperwork. But in recent years with the advent of the affordable microcomputer, smaller companies as well as thousands of independent brokers and agents have discovered that computer utilization is close at hand. And the insurance industry is welcoming this trend toward the new microcomputer technology with open arms.

Until now, agents and brokers would have to spend hours of "desk time" keeping track of client records, renewal dates, premium payments, etc. This of course is very necessary, for the small broker whose time is very valuable, but it can take away from the important time needed to make sales calls, handle problems, and generally expand the territory. By utilizing the new microcomputer technology coupled with good useable software, the insurance professional can reap the benefits of:

- \* better organization
- \* easier access to files
- \* faster access to files
- \* easier file maintenance
- \* less time spent in the paperwork mill
- \* larger file load capability
- \* modularity
- \* better efficiency

The Underwriter lets you keep track of important information about each client/policy so that you are free to do more selling.

The Underwriter is an insurance policy data base that builds and tracks 6 major segments of information:

1. Insured party
2. Issuing company
3. Premium amount



4. Expiration date of policy

5. Agent or salesperson

6. A miscellaneous field for notes, comments, or reminders.

With the power of data base programming, The Underwriter lets you keep track of these information FIELDS and also lets you sort these FIELDS depending upon your order of priority. Reports can also be printed as a result of your file sorting.

PRICE: \$750.00

**TITLE: TIME & MONEY METER**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

DESCRIPTION: Times events and computes dollar amount based on single or multiple hourly rates. Prints slip with details useful in figuring client billing job cost reports. Can be used without a clock! With most clocks, allows simultaneous timing of several events, or running other programs while still timing and has both alarm and elapsed time warning.

PRICE: \$25.00

**TITLE: TIME CLOCK II**

**PUBLISHERS NAME: WEST SIDE ELECTRONICS**

DESCRIPTION: This program keeps track of the time you spend on your computer for each job, client, program, etc., then prints out a detailed report.

PRICE: \$30.00

**TITLE: UNIDEP**

**PUBLISHERS NAME: NATURAL LANGUAGE SYSTEMS**

DESCRIPTION: An asset management system. It calculates depreciation, investment credit and bonus depreciation. It performs automatic subtotalling, as selected by the user. It also files information about each asset. With UNIDEP you can do projections to experiment with various options. The user chooses the relevant options, including depreciation rate, term, length of reporting period, when and how many periods to print and when to update information.

PRICE: \$99.00

**TITLE: UNIVERSAL BUSINESS MACHINE**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

DESCRIPTION: An electronic spread sheet structured around a 100 row x 20 column table. User defines row and column names and equations forming a unique template. Table elements can be multiplied, added, subtracted, divided, summed, averaged and accumulated. Hundreds of unique templates can be created, used, stored and recalled for later use. Supplied with 8 standard templates ready for use covering these subjects.

- Cash Flow Analysis
- Proforma Profit & Loss
- Proforma Balance Sheet
- Real Estate Investment
- Sales Forecaster
- Source and Use of Funds
- Job Cost Estimator
- Inventory Analysis

PRICE: \$89.95

**TITLE: V.I.P. II**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** V.I.P. II now prints your VisiCalc grids the way they are formatted on your screen...in Columns and Rows! And you can select from seven different combinations of column width and number of columns to customize your spreadsheet reference reports.

Automatically compensates for long formulas by segmenting and printing them in clear, continuous blocks. It does the same for very wide reports. The "Grid Option" handles symmetrical spreadsheets up to 26 columns wide (with any number of rows).

With the VISICALC INFO PRINTER you'll never be caught short reconstructing your spreadsheet logic and assumptions. Simply select from the menu of VisiCalc reports on the screen and the file's formulas are output to your printer, neatly printed and displayed.

**PRICE: \$29.95**

**TITLE: VISI-CAIDS**

**PUBLISHERS NAME: DATA SECURITY CONCEPTS**

**DESCRIPTION: FEATURES:**

**LABEL SPLITTER** - Creates a new text file, compatible with VisiCalc, which divides wide alphanumeric (label) entries in a selected column into two or more shorter columns. You select any new width and any number of columns you want. VISI-CAIDS does the rest by splitting wide label columns automatically. This new file can then be loaded into VisiCalc for more calculations giving you more flexibility and better viewing.

**WIDTH ADJUSTER:** Column A: 20 characters wide  
Column B: 6 characters wide  
Column C: 9 characters wide

Now you can print or display VisiCalc models with variable width columns. If you use VisiCalc in conjunction with a printer you will really appreciate what the Width Adjuster can do to improve printed reports. Want a column smaller than 3 characters? Width Adjuster can print a column one character wide.

**FORMULA READER** - Prints out or displays one column or all columns of the formulas, labels and numbers as they appear on the top of the VisiCalc screen, along with their coordinates, without chopping off the last part of long formulas.

**PRINT FILE READER** - VisiCalc data can be saved for use with BASIC programs using the "/PF" command ("PD" for DOS 3.2). The Print File Reader displays or prints the contents of those files the same way VisiCalc prints out normal files. This eliminates the need for booting VisiCalc if no more calculations need to be made and enables files to be read over modems and on Apples with as little as 16K.

**PRICE: \$34.95**

**TITLE: VISIPILOT**

**PUBLISHERS NAME: VISICORP**

**DESCRIPTION:** The VisiPlot (TM) program adds a striking new visual dimension to all your financial analysis, forecasting, budgeting and business planning.

VisiPlot takes all those rows and columns of hard-to-grasp numbers and automatically turns them into easy-to-comprehend charts and graphs, right before your eyes.

You get "presentation quality" graphs and charts that'll aid you in understanding business information, and add clarity to reports and proposals.

And you don't need to know any computer programming to put VisiPlot to work for you. A simple "menu" selection helps you through the easy steps, step-by-step. You enter data from the keyboard, your personal computer performs all the calculations

and displays your graph or chart. You can save your charts for future display, or print them out on your system's graphic printer.

VisiPlot makes it fast and easy to produce all kinds of charts and graphs:

- Line charts, single or multiple.
- Bar charts, single, side-by-side or stacked.
- Area graphs.
- High-Low graphs.
- Scatterplot charts.
- Pie charts.

With VisiPlot, you can "overlay" graphs for more than one data series. You can use foreground and background shading for differentiation (or color, if your system offers it). You can "split" bar graphs with VisiPlot for side-by-side comparisons; such as this year and last year, same months. You can even display two charts or graphs at the same time, each with one or more data series. For example, display a high-low plot of your favorite stock along with a bar chart of trading volume.

VisiPlot automatically generates plotting symbols and legends, automatic x, y axis dimensions, horizontal and vertical grids, and the flexibility of both fixed and movable titles.

VisiPlot turns your computer into a powerful tool for perceiving relationships - not just calculating them. Complex business charts and graphs become easy to produce, easy to revise.

VisiPlot can also interchange data with other Personal Software programs, such as VisiCalc, multiplying your calculating, planning, and graphic display capabilities.

**PRICE:**

**TITLE: VTC SYSTEM PACKAGE**

**PUBLISHERS NAME: VERNON TECH CORP.**

**DESCRIPTION:** Includes Agency Data Management System, Vernon Publishing Package, Business Package, All LifeCalc Modules and Visicalc.

**PRICE: Apple II Version...\$2,800.00**

**Apple III Version...\$2,900.00**

## PAYROLL

### **TITLE: ACCUREC TIME RECORDER/WAGE SUMMARY PROGRAM**

**PUBLISHERS NAME: INDIVIDUALIZED OPERAND (IO)**

**DESCRIPTION:** AccuRec turns an APPLE II into an advanced attendance recorder/reporting system that offers more features than computerized time clocks costing \$3,000 and more.

Employees enter personal ID codes to record their in/out times. Each payday, AccuRec saves valuable administrative time and costly errors by eliminating the time-consuming process of converting time cards into payroll data. AccuRec generates a printout (upon command) of the employees' daily/weekly/total hours and gross pay, including overtime wages. AccuRec can be used in conjunction with existing payroll software, integrating time recording and payroll preparation.

#### AccuRec's Directory:

**PERSONNEL RECORDS** - Data file for each employee

**RUN TIME CLOCK** - Enter ID code to clock in/out

**SHOW EMPLOYEE TIME CARD** - Displays individual time card records

**SET UP PAYMENT DATES** - Enter pay dates for the payroll year

**CLOSE AND PRINT PAY PERIOD** - Printout of employees' total hours and wages for payroll

AccuRec meets the individual needs of your company because you structure the workweek, paydays, overtime rate multipliers, and when overtime benefits begin. If an employee forgets to clock in/out, AccuRec requests that the information be entered manually.

Managers and employees can extract up-to-the-minute information regarding attendance and hours worked. In addition, AccuRec has other uses that include job costing and client billing. It records the start and finish times of various projects, and automatically computes those job costs.

**PRICE: \$179.95**

### **TITLE: ADVANCED PAYROLL PACKAGE**

**PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**

**HARDWARE REQUIREMENTS: 2 Disk Drives, parallel printer**

**DESCRIPTION:** The ADVANCED PAYROLL PACKAGE by Software Technology for Computers was designed by professionals to actually do their own payroll. The program provides everything necessary to do a payroll as large as 125 employees. It will even print payroll checks with YTD data.

The ADVANCED PAYROLL PACKAGE from Software Technology for Computers is not only a complete system for doing payroll; it will also maintain an employee history file. The package will handle commissions, bonuses, sick pay, holiday pay, overtime and cash advances. It contains manual overrides and a complete audit trail.

The program computes all federal and state income taxes, F.I.C.A. and other special local taxes to be withheld. It will print payroll checks, W-2 forms, summary reports, YTD reports, quarterly reports and employee lists, simply by pressing a key. There are no messy tax tables to load in; all the tax table data are contained in the payroll program. A payroll tax update service will keep your system absolutely current, even with the changes in local or federal taxes, and is available at low annual cost so that your system never becomes obsolete!

The ADVANCED PAYROLL PACKAGE has been field tested and proven before release for distribution throughout our network of computer dealers, distributors and consultants. There are currently hundreds of satisfied users throughout the country.



The ADVANCED PAYROLL PACKAGE will automatically compile data from each pay period to compute and print checks, quarterly reports or W-2's as fast as your printer can print! It will save you time and money by computing and updating quarterly, YTD and W-2's in less than 7 seconds per employee. It prints the information on a standard check form available from a major business form supplier. Here is how the program will save you money with as few as 30 employees on your payroll:

With 30 employees and an in-house person to do the payroll at \$7/hour -- That's  $7 \times 8 \text{ hours} \times 52 \text{ payrolls (weekly)} = \$2912.00$

With our program,  $7 \times 52 \times 1 \text{ hour} = \$364.00$

Right here is a potential savings of \$2548

Quarterly reports--

$7 \times 4 \text{ quarters} \times 16 \text{ hours} = \$448.00$

With our program,  $7 \times 4 \text{ quarters} \times .25 \text{ hours} = \$7.00$

Here is another savings of \$441

To reconcile and write W-2 forms

$7 \times 8 \text{ hours} = \$56.00$

With our program,  $7 \times .5 \text{ hours} = \$3.50$

Here is another savings of \$52.50

The total cost without our program = \$3416.00

The cost with our program = \$374.50

Total Potential Savings = \$3141.50

The savings alone in one year more than pays for the cost of a computer!

The ADVANCED PAYROLL PACKAGE program requires no previous background in computers or programming. Extensive documentation and detailed explanations of how the system works provide an unparalleled level of trouble-free user-oriented performance. Furthermore, you can learn to use the program in a minimal amount of time.

**PRICE:**

**TITLE: MICROPERS**

**PUBLISHERS NAME: COMPUMAX**

**DESCRIPTION:** In the MICROPERS package, you get two systems for the price of one: a complete payroll system and a personnel management system.

The first program creates and updates your master file of PERSONNEL. Data includes:

Name and address, telephone, social security number

Married or single status

Action (Like hire, raise, fire, etc.)

Date of action

Position

Salaried or hourly category, rate

Number of exemptions

Miscellaneous deductions

Job or work codes

The second program sets up and maintains the file for PAYROLL transactions: regular and special times worked, percentage on each job or work code.

Subsequent programs compute the PAYROLL REGISTER. Once all deductions and figures are checked and approved. PAYCHECKS are printed and payroll transactions are journalized.

The documentation includes the current Federal and California State withholding tables. By examining these tables along with

the commented data statements that hold the rates and the cutoffs, it will be easy for the user to up-date the program for a future change in rate, or to customize it for another state.

Further programs produce:

Annual W-2 Forms

Values for quarterly 941 report

Job Cost Report/Personnel

History for any employee

Complete history for all employees

The user should back up the PAYROLL file before carrying out the PAYROLL REGISTER computation. Then the same data may be recovered, should an update be necessary before printing the checks.

**PRICE: \$140.00**

**TITLE: PAYMASTER**

**PUBLISHERS NAME: MASTERWORKS SOFTWARE, INC.**

**DESCRIPTION:** A complete payroll system designed with the user in mind. All programs incorporate extensive editing of input fields to keep data "clean" and are menu driven. Broad flexibility allows PAYMASTER to be configured to individual computer setups. Comprehensive record keeping means that any paycheck be accessed any time during the year. A wide range of well formatted, readable reports provide convenient summaries of all payroll information.

**Features:**

- \* five user definable deductions (in addition to tax deductions)
- \* four deduction types (%, \$/HR, loan, \$)
- \* disk based tax tables easily updated
- \* full range of pay periods from daily to annual
- \* different pay periods mixed in each batch
- \* video display printed at anytime with CTRL-Y
- \* readily available checks from a nation wide supplier
- \* up to 200 employees (configuration dependent)
- \* 7 reports, 5 files, 10 programs

**Reports:**

- \* periods earning report
- \* monthly report
- \* quarterly report (941)
- \* paychecks or check register
- \* yearly report (W-2)
- \* year to date report
- \* employee listing

**PRICE: \$175.00**

**TITLE: PAYMASTER**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** A complete stand alone Payroll system which will run your weekly, bi-weekly, semi-monthly and/or monthly payrolls. You can handle a payroll for 100 employees in about an hour with this simple to use system and automatically prepare data for monthly deposits, quarterly reports and annual W-2 preparation. Federal tax and FICA is automatically calculated and has four other user defined fields for state tax, city tax, disability insurance, health insurance, union dues or other deductions. User fields can be programmed once to automatically calculate the deduction amounts.

**PRICE: \$119.95**

**TITLE: PAYROLL**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**BUS-98**

**DESCRIPTION: FEATURES**

- \* **COMPUTES** all Federal and State Income Taxes, plus other state and local taxes for any and all 50 states and Washington D.C. Tax formulas are built in, no messy entry from tax tables required.
- \* **CAPACITY** of 300 employees, 15 Divisions/stores in multiple states...any state. Up to 30 additional user defined deduction types.
- \* **PRINTS** payroll checks, check register, W-2 forms, all summary and quarterly reports, ethnic distribution, employee lists, and file usage information...all in the time it takes your printer to print!
- \* **EASY** to use. Comes with 46 pages of clear, concise documentation tabbed for quick reference.
- \* **FULLSUPPORT** after you make your purchase. Hotline for technical assistance. Payroll tax update service to keep your system current, even with changes in local laws. Available at low cost (free for the first year). Your system never becomes obsolete!

**PRICE:**

**TITLE: PAYROLL**

**PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS: Centronics 739 printer with grappler interface**

**DESCRIPTION:** Your receptionist's favorite- this program calculates payroll and produces checks in a flash! It stores employee data applicable to payroll processing and features a changeable withholding tax table.

**PRICE: \$50.00**

**TITLE: PAYROLL**

**PUBLISHERS NAME: COMPUTER PRODUCTS INTERNATIONAL, INC.**

**DESCRIPTION:** This is an hourly and/or salary payroll.

Has complete Employee file maintenance: add, change, delete, list and inquire. The Employee record contains all pertinent information, including: 3 different rates (regular, overtime and double time), base pay amount (for salaried employees only) 10 different voluntary deductions, additional pay, sick pay, meals, tips, and commissions, plus the appropriate quarterly and year-to-date figures.

Hourly and salary payrolls may be run together.

Allows interactive entry and editing for Payroll Attendance transactions.

The data entered is: employee #, regular hours (if other than default value), overtime hours, double time, any miscellaneous dollars to be paid, any one time deduction. For restaurants, meals and tips may also be entered.

For salary payrolls, the system will default to one period's base pay.

Prints the "Pre-List Audit Trail" showing the data entered above. Automatically calculated gross pay, withholding taxes and any voluntary deductions selected or entered.

Prints the "Payroll Register" showing the dollar amounts for gross pay, FICA, S.D.I., E.I.C., federal and state taxes, total voluntary deductions (this period), and net pay for each employee.

Prints the payroll checks and check stubs in stub-over-check format. Ability to use pre-numbered checks. The starting check # and check date are entered through the CRT.

Prints the "Payroll Check Register" showing each check number, amount and employee's name.

Prints the "Current Earning Register by Department" showing dollars paid for each department.  
Prints the quarterly 941A forms.  
Prints the year end W-2 forms.  
Allows interactive entry and editing of Manual Payroll transactions.  
Employee Master List, Time Card Labels, Employee Deduction register, QTD/YTD Earnings Register, Weekly Pre-List Worksheet, Weekly Pre-List Audit Trail, Weekly Earnings Registers, Weekly Earnings Register By Dept., Weekly Deduction Register, Check Register, Written and Voided Check Register, Prints Payroll Checks, Prints 941A Forms, Prints W-2 Forms.  
**PRICE:**

**TITLE: PAYROLL**

**PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**DESCRIPTION:** Contains the latest tax tables and Social Security formulas. The stand alone payroll system also allows the bookkeeper to keep accurate accounts of the employee's income tax, union dues, disability insurance and health insurance. Tabulate the company's payroll with this disk based system.  
**PRICE: \$120.00**

**TITLE: PAYROLL FOR THE APPLE II PLUS**

**PUBLISHERS NAME: ALTERNATIVE SOFTWARE, INC.**

**DESCRIPTION:** Programming Features

1. Complete source listing and file layouts provide for easy customization
2. Completely menu-driven
3. User-changeable tax rates
4. User may run "test" payroll without permanently updating files
5. Default values
6. Password protected permanent update

**CAPABILITY:**

150 employees (dual disk), 45 employees (single disk) max

**VERSATILITY:**

All frequencies of pay period and combinations; standard \$/Hr.; supervisor premium; fixed salary; 2 overtime rates; piece-work; commissions. FICA, Federal Withholding, up to 3 different state taxes, plus 3 local taxes and 6 miscellaneous deductions. Personnel record; time card entry form; 941A list; W-2's; paycheck and stub; payroll listing and summary report; seniority list. Paycheck utilizes standard NEBS 9000-1 paycheck.

**PRICE: \$349.00 Manual only: \$45.00**

**TITLE: PAYROLL MODULE**

**PUBLISHERS NAME: PACIFIC BANCORPORATION DATA SYSTEMS, INC.**

**DESCRIPTION:** 1. Tracks employee payroll/personnel data; prints checks and check register; departmentalizes payroll costs; prints quarterly report; produces year end w-2's and features easily modifiable tax tables allowing every state's tax tables to be entered easily by the user. Offers complete payroll flexibility to incorporate unique deductions for weekly, bi-weekly, and semi-monthly payroll periods. System is available on hard disk or floppy disk and is capable of handling companies with over 1000 employees.

**PRICE: \$620.00 per module**

**TITLE: PAYROLL PACKAGE**

**PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**  
**BUS-100**



**HARDWARE REQUIREMENTS: 2 Disk Drive**

DESCRIPTION: 2 disk drives, menu-driven program. Employee history include: NAME, ADDRESS #, ADDRESS #2, CITY, STATE, ZIP, FED EX, STATE EX., SOCIAL SEC. #, DATE EMPLOYED, DEPT #, CODE, EMPLOYEE #, STATUS, MARITAL STATUS, PAY RATE, VAC RATE, # VAC HRS., AND PENSION PLAN. Program can generate weekly or bi-weekly payroll. Prints W-2, Qtr. Report, PAY CHECKS, MASTER AND CURRENT files. FEDERAL and STATE withholding taxes are built into program. Maintains a CASH DISBURSEMENT journal. Accumulates payroll for a 53 week period, generates numerous type of payroll reports. Allows data to be searched, sorted and edited. Prints DEDUCTION register and more. Maintain up to 125 EMPLOYEES/EXPENSES for quick and easy PAYROLL. Numerous error protection devices provided. PROGRAM diskette and instruction manual.

PRICE: \$240.00

**TITLE: PAYROLL SYSTEM**

PUBLISHERS NAME: BOB SEVEDGE

DESCRIPTION: Comes in two configurations- single and dual disk drive. Up to 45 and 150 full payroll functions are effectively performed. Features user-changeable tax rates, complete source listings in BASIC, fully documented file layouts for customization and a menu-driven control system. Handles payrolls in which employees have different frequencies of pay, multiple-states and complex city taxes, full personnel records, 941A Federal listings, W-2 forms, time card entries with overtime, paychecks and paylistings, and summary reports.

PRICE: \$349.00

**TITLE: PAYROLL/COST DISTRIBUTION SYSTEM**

PUBLISHERS NAME: ARKEN & ASSOCIATES

DESCRIPTION: This program is menu driven and provides the following basic selections:

- (1) Employee Master File
- (2) Hours Worked
- (3) Payroll Calculation
- (4) Payroll Tax Reports

The system prepares checks for hourly and semimonthly payroll applications (including overtime). Year-to-date files are not updated until the appropriate selection is chosen in the payroll calculations menu, Includes Earned Income Credit calculation. Provides for 4 deductions plus Federal Income Tax, FICA, and EIC. Designed for multiple diskettes for multiple locations-- approximately 200-300 employees per diskette per location. End-of-year file creation for new payroll year eliminates the need for re-entry of employee master file data. Has been thoroughly field tested. In 1980 this system prepared 1200 W-2's and processed approximately 5000-6000 payroll checks. Prepares cost distribution for each payroll for merger into general ledger.

PRICE: \$275.00

**TITLE: PAYROLL/PERSONNEL**

PUBLISHERS NAME: COMPUMAX

DESCRIPTION: PERSON 1- initializes the Master file. Adds and Updates Master Records. Does the Master file's Annual Restart.

PERSON 2- Initializes Payroll File. Adds and Updates Payroll Records.

PERSON 3- Lists an Employee master record, Lists Payroll Records, Lists Employee Master file, Lists Payroll files.

PERSON 4- computes Payroll and prints Payroll Register. Prints

Paychecks and Journalizes (entries into Microledger's Journal file)  
PERSON 5- Prints Quarterly 941 run, Job Cost Report. Annual W-2 run.  
PERSON 6- Lists one Employee's History, Lists all Employees' Histories.  
PRICE:

**TITLE: PAYSYSTEM ACCOUNTANT**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Paysystem Accountant is a complete accounting and payroll system for small business. It is so complete that it even prints out the checks. The accounting element has a setup system to do such things as change the account structure, an entry element which posts your checks and prints them out, a summary report system which is available anytime during the month, and detailed reports by account or month. The audit trail includes a complete transactions record and detail memory system for proof of purpose when IRS comes to call. The payroll element will handle 100 employees with any mixture of common pay periods and print checks, monthly reports, quarterly reports (complete with audit tests), and annual reports for W-2s. Since Federal tax and FICA are calculated automatically the four user deduction fields can be used for state, local or company deductions. The payroll system posts automatically to the accounting system saving you a lot of work.

**PRICE: \$274.95**

**TITLE: SYSTEMS II EX - PAYROLL**

**PUBLISHERS NAME: WESTWARE SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: Two disk drive, 132 column printer**

**DESCRIPTION:** Payroll has the following Specifications:

1. 100 Employees
2. 450 Transactions
3. 450 Deductions or Misc. Pay Transactions
4. Pay Types:

Hourly  
Salaried  
Commissioned  
Hourly with Commission  
Salaried with Commission

5. Pay Periods:

Weekly  
Bi-Weekly  
Monthly

6. State Tax Table for your state.

THE EMPLOYEE MASTER FILE will keep current, quarter and year to date information for each employee. The check writer portion of the program will give a comprehensive stub report each time a check is issued, which shows current and YTD earnings.

At the end of the year the W-2 form writer will allow you to customize your printout to any tractor feed form on the market. The payroll module is a comprehensive system that provides for many different situations. Some of the outstanding features are:

- |                                   |                                |
|-----------------------------------|--------------------------------|
| 1) Password Protected             | 6) Audit trail                 |
| 2) Menu Driven                    | 7) Comprehensive check stub    |
| 3) Error Handling                 | 8) Miscellaneous deduction     |
| 4) Easy to update tax tables      | field (savings bonds, dues,    |
| 5) Customized tax rates for state | credit union deductions, etc.) |

Reports Generated are as follows:

Prints paychecks, quarterly summary, W-2's, check register,

deduction register, and comprehensive check stubs.  
**PRICE: \$545.00** for 5 1/4" Floppy  
\$595.00 for Corvus

**TITLE: THE COMPUTER PROGRAMMED ACCOUNTANT CPA 4 PAYROLL**  
**PUBLISHERS NAME: CONTINENTAL SOFTWARE**

**DESCRIPTION:** Maintains personnel records for as many as 100 employees. Quarter-to-date and year-to-date earnings and deduction records. Employees are departmentalized and designated hourly or salaried. Prints complete Payroll Checks, 941 information, W-2's, State of California DE-3 information. Prints Payroll Journal and posts to General Ledger.

**PRICE: \$15.00; manual**  
\$250.00

**TITLE: TPS CANADIAN PAYROLL SYSTEM**  
**PUBLISHERS NAME: TPS (TIME PROVEN SYSTEMS, INC.)**

**DESCRIPTION:** TPS CANADIAN PAYROLL SYSTEM is a proven payroll system which was originally designed for and has been successfully running, across Canada, on one of the industries leading Minicomputer Systems. This system has been specifically designed with the user in mind with all programs being Menu Driven and documentation directed towards the first time user rather than the experienced programmer.

TPS CANADIAN PAYROLL SYSTEM is derived from and reflects the needs of Canadian Businessmen and can accommodate up to 100 employees per department, branch or location. It is also flexible enough so that it may even be used with a single drive system.

**FEATURES:**

- Up to 100 employees per department, branch or location with a two drive system.
- Will accommodate up to 30 employees per department, branch or location with a single drive system.
- Single or multi-province capability (contains the appropriate up-to-date tables for all of Canada's Provinces and Territories).
- Accommodates all payroll periods (e.g., weekly, bi-weekly, monthly).
- Will accommodate various payroll types (e.g., salaried, hourly) and will calculate over-time and double-time earnings.

**PRICE: \$450**

## REAL ESTATE

### **TITLE: APARTMENT MANAGER**

**PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**

**DESCRIPTION:** 2 disk drive, menu driven program written in assembly language and APPLESOFT II. All you will ever need to manage your apartment. Handles up to 6 BUILDINGS with a maximum of 120 units each. Complete turnkey operation. Data categories include APT #, TYPE, TENANT NAME, PETS, CHILDREN, SECURITY DEP., PET DEPOSIT, POOL DEP, MISC. DEP., RENT ALLOWANCES, DATE MOVED IN, VACANCY DATE, REFERRAL, CONDITION OF APT., DAMAGE AMT. AND COMMENT LINE. Search, sort, enter, edit and vacate tenants. Maintains a MTD and YTD rent receipts as well as complete utility reports, rent lost by vacancies. Maintains expenses, vacated tenants reports and much more. Program Diskette and instruction manual.

**PRICE: \$325.00**

### **TITLE: APARTMENT MANAGER PROGRAM**

**PUBLISHERS NAME: REALTY SOFTWARE**

**HARDWARE REQUIREMENTS: 2 Disk Drives, 132 column printer**

**DESCRIPTION:** This program can handle up to 6 complexes with a maximum of 130 units each. It handles rent receipts, operations statements, late rents, vacancies and more. It generates reports for YTD, MTD and current rent receipts. The entire operation is turnkey, supplied with bootstrap disk.

**PRICE: \$325**

### **TITLE: FINANCIAL PACKAGE**

**PUBLISHERS NAME: REAL ESTATE MICROCOMPUTER SYSTEMS, INC.**

**DESCRIPTION:** The Financial Package includes four programs (with manuals):

AMORTIZATION TABLE

DEPRECIATION SCHEDULE

INTERNAL RATE OF RETURN/FINANCIAL MANAGERS RATE OF RETURN

WRAP-AROUND LOAN ANALYSIS

#### **I. AMORTIZATION TABLE**

This program calculates monthly and annual amortization schedules for loans, leases, or other series of amortized payments. A choice of beginning-of-month or end-of-month payments is allowed. Output may be video or printed.

#### **II. DEPRECIATION**

This program calculates a depreciation schedule based upon straight-line, sum-of-years' digits, declining-balance, or component depreciation. The maximum amount to be depreciated is \$99.9 million. The maximum schedule is 60 years. Input and output data are rounded to the nearest dollar.

The user specifies the date of purchase, the amount to be depreciated, the expected life of the asset, bonus depreciation (if taken), the salvage value amount (if salvage exists), and the type of schedule desired. Output may be viewed on the video screen or a printed report may be created. As with other programs, data entries may be changed at any time.

Component depreciation allows up to 20 items and each may use whatever method is appropriate as well as different depreciable lives and salvage values.

#### **III. INTERNAL RATE OF RETURN AND FINANCIAL MANAGERS RATE OF RETURN**

This program calculates the INTERNAL RATE OF RETURN and the FINANCIAL MANAGERS RATE OF RETURN from a series of annual cash flows. Up to 32 cash flows may be entered. Individual cash flows may be as large as \$99.9 million. The program allows input



date to be reviewed and changed at any time. The INTERNAL RATE OF RETURN is calculated a SAFE RATE and a REINVESTMENT RATE must be specified. Results are displayed on the video screen and may be printed in report form.

#### IV. WRAP-AROUND LOAN ANALYSIS

This program calculates the annual rate of return on a loan that is "wrapped around" an existing loan. Such loans are known as wrap-around mortgages, contracts for deeds, or inclusive deeds of trust. The program allows complete flexibility as to interest rates, compounding periods, and other loan terms.

A payoff date prior to the maturity of either loan may be set. The computer will then calculate principal repayment requirements for both loans. Loan conditions may easily be changed to allow creation of a wrap-around financing having a specified yield. Annual loan payments for the underlying loan and the wrap are calculated and displayed. Output may be on the video screen or a report may be created which shows all loan characteristics, the yield on the wrap, and annual cash flows.

**PRICE:**

#### **TITLE: HOME PURCHASE ANALYSIS**

**PUBLISHERS NAME: REALTY SOFTWARE**

**DESCRIPTION:** This program aids home buyers and sellers, investors and real estate brokers in making decisions when buying, selling and comparing properties.

It also considers the effects of property taxes, insurance, utility expenses, interest expenses, closing costs and debt service on the total amount of cash necessary for purchase and the total monthly payment. It calculates the return on investment and the actual leverage achieved based on a user estimated annual appreciation rate.

As many situations as desired may be analyzed varying the amounts of down payment, second financing, interest rates, appreciation and other pertinent purchase criteria. Studies may be done on several potential investments allowing a very thorough financial comparison of the properties involved and an analysis of the best method of financing.

Analysis may be printed for a permanent record.

**PRICE: Cassette or Disk \$40.00**

#### **TITLE: INCOME PROPERTY ANALYSIS**

**PUBLISHERS NAME: REAL ESTATE MICROCOMPUTER SYSTEMS, INC.**

**DESCRIPTION:** Analyze investment properties for your client quickly and efficiently.

This program asks for the property operating information, growth rate, depreciation method, and investor tax position. Results for up to 10 years are shown both visually and in printed reports. Program highlights include:

**SIMPLE DATA ENTRY** - the program asks for all relevant information and allows easy correction or change for simulations.

**OPERATING STATEMENT** - Income & expense items may be entered as actual dollar amounts or as percents.

**LOANS** - Four loans of various types (including leases or irregular yearly payments) may be used.

**DEPRECIATION** - Any composite method allowed. Component may be computed using REMS "Depreciation" program.

**OTHER** - Tax information, growth rate, and sales costs are also entered.

**VISUAL OR PRINTED OUTPUT** - The analysis results may be viewed on the CRT screen or printed out in a 4-5 page report.

**SIMULATIONS** - The property data, financing, etc. may be changed easily for rapid simulation of various projections of growth

rates, vacancy factors, or tax position.

**DATA STORAGE** - The input information may be stored on the program diskette for future use. 60 sets of property information may be stored on a single diskette.

**MANUAL** - A 42 page manual provides detailed explanation of how to use the program with several examples. The manual can be used as a learning tool for users just getting started in property analysis as well as for experienced investors and counselors.

**PRICE:**

**TITLE: PROPERTY LISTING AND COMPARABLES**

**PUBLISHERS NAME: REALTY SOFTWARE**

**DESCRIPTION:** This program will create and maintain property listing information and provide screened property listings for potential buyers and also comparable listings for appraisals. Each listing stores information such as listing price, selling price, monthly income, monthly expenses, listing date, expiration date, date sold, square footage of improvements, age, city, city Zone, down payment asked for and a memo area for related notes. This information is entered easily and updated by filling in an on-screen form.

Property listings may be screened by any or all of the following criteria including maximum asking price, minimum asking price, number of units built, city, city zone, maximum price per square foot of improvement, maximum ratio of price divided by yearly income and minimum monthly cashflow.

The program is easy to use and Menu driven. Up to 1000 Listings may be stored on one disk. Numerous files may be maintained for different property types or different areas of location.

**PRICE: \$325.00**

**TITLE: PROPERTY MANAGEMENT**

**PUBLISHERS NAME: REAL ESTATE MICROCOMPUTER SYSTEMS, INC.**

**DESCRIPTION:** This program is designed for the property owner or manager who wants up-to-date tenant information and operating statements. It provides easy entry from your check book to a single entry general ledger. The income and expense accounts are the same ones used on APOD statements but may be changed. Each program diskette will accommodate one year's transactions and all tenant information for approximately 25 property units. Multiple diskettes would be used for more units and additional owners or managers.

The tenant information file includes names, addresses, phone number, contract start and end dates, various deposits, and comments concerning the tenant or the unit. Separate files are maintained for active and inactive tenants.

The general ledger file contains transaction data. Each entry has a date, check number, account classification, tenant, and comment (or payee). Tenant deposits are shown in a separate account and not included in revenue until (and if) they are realized as revenues when the tenant leaves.

Printed reports include:

Tenant listing (active and inactive)

General Ledger

General Ledger by tenant

General Ledger by account

Operating Statement

Operating Statement by tenant

The operating statements show current month and year-to-date amounts, beginning and ending account cash balances, and percentages for income and expense categories.

**PRICE:**

**TITLE: PROPERTY MANAGEMENT SYSTEM**

**PUBLISHERS NAME: REALTY SOFTWARE**

**DESCRIPTION:** The programs may be purchased separately or as a full system at a slightly lower price.

**RENTAL EXPENSE ANALYSIS PROGRAM (REAP)**

REAP is designed to provide expense information for each building in payment-by-payment and summary format including TAX READY TOTALS for IRS REPORTING and audits.

BUILDING PAYEE REPORT displays expenses for any building, for all or selected payees. A year's payment record, including total yearly expense, average monthly expense and total number of payments, can all be displayed on-screen at once for any regularly paid account. Duplicate or missed payments are easily identified.

UTILITY SUMMARY REPORT displays yearly, year-to-date, or monthly average utility expenses for each building under the categories gas, electric, water and trash. This allows quick building-to-building comparisons identifying any out-of-line expenses.

TAX TOTALS REPORT displays totals for each building under the categories utilities, insurance, property tax, loan interest and repairs. This report can be submitted "as is" with Schedule E when filing taxes.

SPECIAL ACCOUNTS may easily be set up to track auto, general office, management, advertising, telephone or any other expense type.

COMPLETE DATA INPUTTING, EDITING AND SORTING capabilities, all with extensive error recovery, provide easy data file maintenance. Expense data may be added to the file and the latest reports displayed or printed for a permanent expense record whenever needed.

**RENTAL INCOME INFORMATION PROGRAM (RIIP)**

RIIP is designed for the property owner or manager who rents property (of any kind) on a monthly basis, providing background information on each rental and complete income tracking that is timely and accurate.

RENTAL INFORMATION for each unit includes up to three names, four phone numbers, date rented, rent amount and deposits. This information, along with income tracking data, is stored on diskette and can be recalled and displayed on-screen at any time or printed for a permanent record providing immediate access to all pertinent rental data.

Rental information can easily be changed, added to or deleted using programs input-editing facilities insuring up-to-date data.

**FEATURES:** Tenant information; late rent reports; YTD & monthly income; handles - partial payments, returned checks, advance payments; 5 digit expense accounts; building expense report; vendor expense report; income tax report; all reports can be printed; complete documentation; easy data entry & edit; 200 units per file.

**PRICE: \$225.00**

**TITLE: PROPERTY SALES ANALYSIS**

**PUBLISHERS NAME: REALTY SOFTWARE**

**DESCRIPTION:** This program shows the net result of a real property sale to the seller. All capital improvements, selling costs, legal fees, primary and secondary financing, term of ownership and depreciation are considered in the analysis of the actual gain realized, the amount considered in the analysis of the actual gain realized, the amount of that gain that is taxable, the cash amount that will be generated and a calculation of the percentage profit realized.



All input values can be varied easily and the results viewed on the screen and optionally printed for permanent record. The modules flexibility allows a "what if" type of analysis to be applied to the sales price and all other variables, showing the user many possible sales results. A property to property comparison can be produced to help select between several properties to sell.

**PRICE:** Cassette or Disk \$40.00

**TITLE: REAL ESTATE ANALYSIS MODULES**

**PUBLISHERS NAME: REALTY SOFTWARE**

**DESCRIPTION:** 1) Home Purchase Analysis, 2) Tax Deferred Exchange, 3) Construction Cost/Profit, 4) Income Property Cashflow, 5) APR Loan Analysis, 6) Property Sales Analysis, 7) Loan Amortization.

**PRICE:** \$35.00 per module

**TITLE: REAL ESTATE ANALYZER**

**PUBLISHERS NAME: HOWARD SOFTWARE SERVICES**

**DESCRIPTION:** A software package for Apple computers takes the guesswork out of real estate investing for professionals and individuals alike. This package helps you make intelligent buy and sell decisions by computing the true net cash flows and annualized after-sale return-on-investment for any property you define.

The software allows you to view the direct impact of loan terms, tax bracket, depreciation schedule and holding period, as well as the separate inflation rates for rents, property values, expenses and taxes.

All information is itemized in tabular form on the video screen or a line printer, year-by-year for the ten years after purchase. Use with a disk unit also allows you to file, retrieve and alter information on your properties.

**PRICE:** \$49.00

**TITLE: REAL ESTATE TEMPLATES**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** The Real Estate Analyst Series for VisiCalc Templates helps you scrutinize potential realty ventures, so you minimize risk - and maximize yield - when investing in income properties.

Written using the popular VisiCalc financial modeling program, the VisiCalc Real Estate Templates utilize built-in calculations that enable brokers, property managers, realtors, and speculators to automate time-consuming property analysis, the templates feature comparative depreciation, amortization, and mortgage loan analysis options useful for projecting cash flows and estimating income tax deductions.

**This program:**

- includes built-in template calculations that can be revised so you can adjust them for special circumstances.
- simplifies data checking and comparison through their split screen capability so you can display, move, and modify widely separated entries side-by-side and see the results;
- provides comparative analysis of depreciation, amortization, and payment methods so you can choose from a variety of investment strategies;
- generates selective printouts so you can show reports to clients without exposing sensitive information.

It lets you calculate combinations of sales price, financing, inflation rate, depreciation techniques, changes in income and



expenses, and other investment components.

The three amortization template options (Monthly Calculator, Monthly Schedule, and Annual Summary) allow you to compare the financial repercussions of both fully-amortized and balloon payment loans. For example, Monthly Calculator lets you substitute values for loan variables before choosing the most affordable plan.

The Mortgage Loan Analysis Template calculates: (1) cumulative interest and principal from the acquisitions date; (2) the principal balance on the acquisitions date; and (3) the interest and principal paid during the past 12 months. Partial-year payment calculations can be made for property owned less than one year.

You can calculate the tax consequences of property depreciation by three methods: straight line, sum-of-the-year's digits, and declining balance. It allows you to display all three methods side-by-side for convenient comparison. The template also automatically switches from declining balance to straight line depreciation in the year during which the straight line method is more advantageous to the taxpayer.

To use the Real Estate Analyst Series of VisiCalc Templates, you need the VisiCalc Computer Software Program disk, which is available from your Apple/Personal Software dealer.

**PRICE: \$65.00**

**TITLE: REAL-SOFT**

**PUBLISHERS NAME: REAL ESTATE SOFTWARE**

**HARDWARE REQUIREMENTS: 2 Disk Drives**

**DESCRIPTION:** REAL-SOFT is an integrated set of computer programs designed specifically for real estate agency use. All routines are fully customizable to meet the requirements of virtually any agencies. Up to 10 different house styles, 12 different listing features and 16 different areas. Very easy to learn - included is a complete set of practice data to experiment with.

Other useful routines in this powerful set of programs include a Property Availability Report, full Mortgage Amortization Tables (American OR Canadian method), and a Mortgage Comparison Analysis Report. Then use still another part of REAL-SOFT to estimate the replacement cost of any listing (using local factors), or to estimate the mortgage amount that your client can qualify for!

**PRICE:**

**TITLE: RENT VS. BUY**

**PUBLISHERS NAME: REAL ESTATE MICROCOMPUTER SYSTEMS, INC.**

**DESCRIPTION:** This program provides an analysis of the before or after-tax gains or losses associated with the purchase of a home versus renting the home or a similar unit.

The user must specify certain information about the home to be purchased: price, financing terms, closing costs, utility and other expenses, expected annual rates of change or certain expenses, size of home, etc. Similar information about the rental is used for comparison: yearly rent, yearly expenses, anticipated changes in rent and expenses, and size of the rental. Once the information is entered, the user may view a graphical analysis, print a 2 page report, and selectively change items to see the effect upon the analysis.

**PRICE:**

**TITLE: RENTAL MANAGER**

**PUBLISHERS NAME: BLUE LAKES COMPUTING**

**DESCRIPTION:** A total system for rental property management. The

RENTAL MANAGER handles accounts receivable, accounts payable and the general ledger. It also maintains the chart of accounts and buildings, listings of present and future tenant, and will print reports and notices for "problem tenants". The RENTAL MANAGER automatically posts entries between systems and creates back-up copies of information entered. The system includes a separate instructional version and full user documentation.  
**PRICE: \$695.00**

**TITLE: TAX DEFERRED EXCHANGE MODEL**

**PUBLISHERS NAME: REALTY SOFTWARE**

**DESCRIPTION:** This program shows all the financial impact of a tax deferred or partially tax deferred property exchange allowing investors and realtors to make informed decisions when trading property up or down.

The model considers the effect of appreciation, depreciation, legal fees, property improvements, mortgages and boot on the actual total gain realized, the gain deferred and the amount taxable. It also figures the impact the property exchange will have on the new depreciable tax basis.

Numerous situations may be analyzed varying the amount of boot and other pertinent exchange information.

Studies may be done on different potential trade properties allowing a very thorough financial comparison of the properties involved and an analysis of the best method of structuring the financing. For a permanent record the analysis may be printed.

**PRICE: Cassette or Disk \$40.00**

**TITLE: THE LANDLORD**

**PUBLISHERS NAME: MIN MICROCOMPUTER SOFTWARE**

**HARDWARE REQUIREMENTS: 2 Disk Drives, 80 Column Printer**

**DESCRIPTION:** This is an apartment management software package for Apple II computers. This program can be used by apartment properties of up to 400 units.

THE LANDLORD provides managers and property owners with listings of residents, apartments, and past residents, as well as reports on vacancies, intents to vacate, lease expirations, and resident payments. Records of disbursements and other financial transactions are maintained by the system and a monthly property analysis statement is produced.

It allows entry of resident payments and charges using up to 26 different account codes. Pet and security deposits, overpayments, and returned checks are also handled by the system. An outstanding balance report allows follow-up of delinquent residents.

It provides instant access to information about apartments and residents. Data that is on file can be displayed on the screen of the Apple II or can be printed if you need a permanent copy of the information. The following reports are provided:

- Vacancy Report
- Lease Expiration Report
- Resident Payment Report
- Journal Entries Report
- Account Summary Report
- Property Statistics Report
- Apartment and Resident Listing
- Past Resident Report
- Notice to Vacate Report
- Chart of Accounts
- Disbursement Report
- Property and Tax Analysis

This package is for managers who have no prior computer or data processing experience. The manual as well as the instructions that appear on the screen are non-technical in nature.

PRICE: \$795.00

**TITLE: THE RENTAL MANAGER**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**HARDWARE REQUIREMENTS: 2 Disk Drives, 132 Column Printer**

**DESCRIPTION:** This program manages rental properties, including Accounts Receivable, Accounts Payable, General Ledger, Fixed Assets Management, and Tenant Records for current and future tenants. It provides for automatic processing of apartment and parking rents, including partial payments and separate payments by several roommates. The early payment discounts and late payment penalties are applied automatically if these options are selected. It generates addressed statements/invoices and either remittance advices or checks. Accounting routines post payables and receivables by property, keeping track of due dates, and producing a trial balance at any time. Fixed assets management figures depreciation and amortization. Anyone can use this program if they have a basic knowledge of accounting.

It handles up to 250 apartments per set of disks, and these are accounted for by building. More apartments may be added by simply adding data disks. Similarly, a management office can manage the properties of many different owners by keeping the accounts on separate disks.

PRICE: \$695.00

## STOCK MARKET

### **TITLE: ANAL**

**PUBLISHERS NAME: GALAXY**

**DESCRIPTION:** ANAL (Analysis 1) is a set of BASIC programs which enables the user to perform analyses on the Dow Jones Industrial weekly average data, beginning with the year 1897. From 6 months to 5 years of user selected DJI data can be plotted on the entire screen in one of 5 colors, using Apple's High Resolution capabilities. The DJI data can be transformed into different colored graphic representations called transforms. They are: user specified moving averages; a least squares linear fit (best straight line); filters for time, magnitude, or percentage changes; and user created relationships between the DJI data, a transform or a constant using +,-,\*,/ operators. Colored lines can be drawn between graphic points. Graphic data values or their dates of occurrence can be displayed in text on the screen. Any graph or text can be directed to a printer. The Grid Scale is automatically set to the range of the graphs or can be user changed. As many colored graphs as wanted can be plotted on the screen and cleared at any time. The user can code routines to operate on the DJI/transform data or create his own disk file data base. ANAL commands can be used with his routines or data base. An Updated program allow the user to easily update the DJI file with current DJI weekly data. Includes manual. APPLESOFT ROM. 48K

**PRICE: \$49.95**

### **TITLE: ANNUAL REPORT ANALYZER**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** Provides 5-year profile of stock performance.

**PRICE: \$22.95**

### **TITLE: BONDS**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** A variety of bond programs to calculate interest and yield to maturity, present and future value, effective yield and basis price.

**PRICE: \$12.95**

### **TITLE: COMMODITIES TRANSACTIONS**

**PUBLISHERS NAME: PROFESSIONAL COMPUTER SYSTEMS**

**HARDWARE REQUIREMENTS: two disk drives, 80 column printer**

**DESCRIPTION:** This system is made for the Commodities Trading firms. Keeps track of all customer transactions, holdings, balances, and prints Transaction Confirmations. Upper limit of 250,000 customers. Search on customer ID or Name.

**PRICE: \$350.00**

### **TITLE: COMPUTERIZED STOCK MARKET ANALYSIS**

**PUBLISHERS NAME: STOCK MARKET SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: D.C. Hayes Micromodem II, Paddles (1 set), A suitable printer, while not required, is strongly recommended.**

**DESCRIPTION:** "The construction of On-Balance Volume charts is a very time consuming process and it fortunately coincided with the birth of the computer age. Now, On-Balance Volume programs have been written for the computer, making my discovery highly practical."- Joseph E. Granville

Even if you have never used a personal computer before, you can take advantage of a major breakthrough in stock market investment



planning. You can have at your fingertips the information necessary to make sound investment decisions. Stock Market Software has developed a comprehensive, easy to use, three disk program called ON-BALANCE VOLUME CHARTING. The speed and efficiency of this software gives your personal computer the power to help you follow more stocks, analyze, analyze historical data, and interpret activity for timely decision-making. STOCK MARKET SOFTWARE was incorporated in 1980 by a small group of investors who saw the nearly limitless potential of the micro-computers in gathering and interpreting stock quote data. During the months that followed, countless man hours went into writing a program which could fetch historical data for any stock, update it daily, and then list the data in an easy to read format- a format which could permit the user not only to display or print the data but edit it as well, setting up groups of stocks to meet his own requirements. More hours went into writing a program which could calculate this data, plotting the Granville indicators automatically for any stock currently traded on the major US exchanges. The result is ON-BALANCE VOLUME CHARTING- a three disk, easy to use program which requires no previous experience with computers.

#### OBV CHARTING

The main program, called OBV Charting, will chart, on this screen or on a printer, the OBV, price line, and moving average for each stock the user selects, indicating breakouts and field trends. In addition, the program will chart the CLX, NFI, and CCLX for any groups which the user has set up. OBV Charting provides complete editing capabilities, allowing the user to add and delete stocks from his lists, correct for stock splits, and set his OBV to agree with the figures used in the Granville Market Letter.

#### OBV MICROLOG

Historical data must be collected before the charts can be drawn and used. OBV Microlog, the second of three program disks included in ON-BALANCE VOLUME CHARTING, will automatically dial up, log on, and fetch stock quote data from CompuServe's MicroQuote. It will fetch up to one year of historical data for as many stocks as the user wishes. When the volume, high, low, and closing prices for the number of days requested for each stock have been fetched and stored on a disk, they may be edited, displayed on the screen or printed out. OBV Microlog will permit the user to catch up after a period of days or weeks of missed data. It may also be used for daily update if desired.

#### OBV DOWLOG

The third program disk included in ON-BALANCE VOLUME CHARTING is called OBV Dowlog. This program will update the figures for each stock on your stock list on a daily basis. It is designed to automatically dial up, log on, and fetch stock quote data from the Dow Jones News Retrieval service. It will fetch yesterday's close, today's open, high, low, close, and volume of any stock currently traded fifteen minutes after the market closes. As with OBV Microlog, the quotes may be edited, displayed on the screen, or printed out.

Since the On-Balance Volume concept of charting stock was developed by Joseph Granville nearly twenty years ago, people have been toiling over the tedious, time-consuming chore of charting their stocks each evening. Now with ON-BALANCE VOLUME CHARTING and the Apple II personal computer, you can follow more stocks in less time and get a headstart on tomorrow's business with "night before" planning.

What used to be tedious work...now happens for you automatically!

An automatic updating routine provides "night before" planning- no need to wait for the morning paper to get the facts. A detailed manual accompanies the disks, explaining each step until the user is comfortable and familiar with the program. Stock Market Software provides full customer support. Our phones are open for questions and help where necessary. Updates and revisions are sent to all users as they are developed.

**TIMING...THE KEY TO SUCCESS IN THE STOCK MARKET INFORMATION...THE INVESTOR'S ADVANTAGE**

Now you can make sound investment decisions...follow more stocks in less time...use night before information.

Obtain OBV charts, price lines, moving day averages; NFI, CLX, and field trend indicators; list data for each stock or group of stocks; and much more.

Information when you need it...At a price you can afford Computerized On-Balance Charting brings you timely information with the added convenience of automatic updating- for about a penny and a half per stock a day. As with many costs of managing your portfolio, the OBV software package is tax deductible in most cases.

**PRICE: \$1500.00 (includes \$300.00 for the first year's maintenance fee)**

**TITLE: CYBER - TECH STOCK VALUATION PROGRAM**

**PUBLISHERS NAME: CYBER-TECH**

**DESCRIPTION:** NOW the home computer owner can have the same analytical techniques used by the TOP PROFESSIONAL MONEY MANAGERS. CYBER - TECH now offers a Stock Valuation Program based on Modern Portfolio Theory which provides logical computerized criteria for identifying undervalued stocks.

Is based on a model developed by Wells Fargo Bank, an acknowledged pension fund management.

Takes the average investor out of the age of MYSTERY, MAGIC and VODOO and into the age of SCIENCE.

Comes with a 22-page printed INSTRUCTION MANUAL which explains the operation of the program, provides background theory and analyzes two separate stocks.

Input data required for program operation can be obtained from investment periodicals such as Value Line Investment Survey.

Output consists of expected DIVIDENDS, EARNINGS, GROWTH RATES, PAYOUT RATIOS, the INTERNAL RATE OF RETURN over a MULTI-YEAR PERIOD, and a COMPUTERIZED RISK ADJUSTED STOCK-ATTRACTIVENESS RATING,

Since the purchase of this program is an investment expense, the FULL PRICE of your CYBER-TECH STOCK VALUATION PROGRAM IS TAX DEDUCTIBLE.

**PRICE: \$49.95**

**TITLE: DOW JONES SERIES PORTFOLIO EVALUATOR**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** The Dow Jones Series Portfolio Evaluator program allows you to store, modify, and update approximately 100 individual portfolios of up to 50 stocks each on a single diskette. Additionally, by connecting you Apple Computer System to a telephone, the Portfolio Evaluator program permits you to access quotes for thousands of companies using the Dow Jones New/Retrieval System.

The Portfolio Evaluator - a convenient, time-saving way to keep you finger on the pulse of the stock market.

**THE DOW JONES SERIES PORTFOLIO EVALUATOR...**

\*saves time usually spent obtaining quotes from a broker by

giving you access to information about stocks, preferred stocks, and warrants listed by Dow Jones...

- \* eliminates the need for time-consuming math, because it instantly tabulates the current value - gains or losses - of each portfolio, and displays it on the screen or on paper via a printer...

- \* increases your efficiency, because it automatically catalogs the portfolios by name and displays the complete catalog for your review upon command

The Portfolio Evaluator main menu contains three program options. To create a portfolio, select the EDIT or CREATE PORTFOLIOS option. The edit module will be loaded from the diskette, and the Portfolio Evaluator program will lead you through the data entry process step-by-step. Preformatted screens assist you in entering stock symbol, number of shares, purchase date, and purchase price for each stock in a portfolio.

Perhaps the most exciting aspect of the Portfolio Evaluator is its ability to let you "log on" to the Dow Jones New/Retrieval Service. With your password (which will be given to you by your dealer when you sign the Dow Jones Stock Quote Reporter agreement), you will be able to access the Dow Jones computer and "fetch" current quotes in real time. (To conform with federal regulations, stock quotations are delayed 15 minutes.) You'll need a working telephone, a modem, and a special interface to take advantage of this part of the program.

To access Dow Jones, select FETCH CURRENT QUOTATIONS from the main menu; the "log on" module will be loaded into your Apple. Once again, the Portfolio Evaluator will lead you through this part of the program step-by-step. You'll be instructed to dial a Dow Jones telephone number (local, in most cases) and insert your telephone receiver into the modem. After you have satisfied the Dow Jones computer with an acceptable password, you'll be able to update every quote in every portfolio on your diskette.

You can review a revised portfolio simply by choosing DISPLAY OR EVALUATE STOCKS from the main menu. The display module will be loaded from the diskette, and you will be asked for the name of the portfolio you wish to review. Type the name and press the "RETURN" key. If you've forgotten the name of the portfolio, simply type a question mark and press the "RETURN" key to view the diskette catalog.

After identifying the desired portfolio from the catalog, press the space bar and enter its name. "SEARCHING FOR PORTFOLIO" will appear on your screen. You will be presented with a list of four options within seconds.

The first three options listed allow you to obtain previously stored information within the specific portfolio; the fourth option - PRINTER ON/OFF - allows you to print that information.

PRICE: \$50.00

**TITLE: INTELLIGENT INVESTOR SERIES 1**

**PUBLISHERS NAME: THE INTELLIGENT INVESTOR**

**HARDWARE REQUIREMENTS: Dual Disk Drives**

**DESCRIPTION:**

- Keeps Record of All:

  - Advisory Fees

  - Margin Expenses

  - Investments

  - Cash Additions & Withdrawals

  - Brokerage Commissions

  - Dividends & Interest

  - Quarterly Portfolio Valuations

- Tells You:

  - Who Made More from Your Account - Your Stockbroker or You



- Calculates
    - Dollar Weighted Rates of Return
    - Portfolio Yields
    - Time Weighted Rates of Return
  - Evaluates
    - In Terms of Alternatives
    - Your Investment Decisions
- Your Investment Recommendations & Decisions
- Utility
    - All Investment Media - Bonds, Stocks, Real Estate, Commodities, Options, Etc.
  - Tax Deductible
    - Consult Your Accountant for Requirements
- PRICE: \$69.00**

**TITLE: INVESTMENT DATA SYSTEM**

**PUBLISHERS NAME: URBAN AGGREGATES, INC.**

**DESCRIPTION:** Designed for the investor who wants a simple, convenient way to create and collect stock or commodity data for analysis in user written programs. Maximum flexibility is provided in file creation to allow the user to customize his files of stocks and/or commodity data. Historical information is quickly and easily entered from graphs of stock prices, volume, earnings, etc. using a digitizer. Current price and volume data is easily entered. All programs are unlocked so that the user may modify the programs to suit his own needs. This is a time series data system for the advanced programmer.

**PRICE: \$150.00**

**\$ 20.00 manual only**

**TITLE: MARKET ADVISOR**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS:** Two disk drives and an 80 column printer

**DESCRIPTION:** The Market Advisor permits the investor or trust official to enter, update, and print his/her investment portfolio. When desired the investor can use the system to enter quotations from sources such as Dow Jones, local newspapers, or other current information sources. The system can analyze long and short term losses, fees paid to specific brokerage firms, and specific gains and losses in relation to particular investments. Let the "Market Advisor" keep you to to date and in the chips.

**PRICE: \$139.95**

**\$ 25.00 Operating manual**

**TITLE: MARKET CHARTER**

**PUBLISHERS NAME: RTR SOFTWARE, INC.**

**DESCRIPTION:** Stock charting on your Apple II

High-Low Close Bar Charts

Simple, Exponential, Weighted Averages

Trendlines, Resistance Lines, etc.

Volume Charts with average volume

Hard Copy of the Charts and Data

Comparison Charts

Weekly & Daily Stock Histories available

User Oriented

User can create and update the Data base

Many Satisfied Users

Manual, Demo Diskette and Stock Histories are available separately. Call or write for information on new offering in the financial field.



**PRICE: \$129.95**

**TITLE: MARKET TRACKER**

**PUBLISHERS NAME: H & H TRADING**

**HARDWARE REQUIREMENTS: STOCK TRACKER** program on the 30 DJIA, two disks, printer highly recommended

**DESCRIPTION:** A composite of 6 technical indicators to determine bullish or bearish intermediate stock market trend, with corresponding buy, sell and hold recommendations. Designed and used by registered Investment Advisor to screen STOCK TRACKER program's recommendation on individual securities. Tabular data files may be displayed on screen or printed on paper. Includes Market Grapher program to graph point or bar graphs of the individual indicators and the composite on screen or paper. Indicators are:

5-day moving averages of new highs and new lows

10-day advance/decline line

30-day most actives oscillator

Dow industrials chart pattern and trendline

Short interest ration

Howard Katz' version of Joseph Granville's climax indicator

Requires some user judgement; prior stock market and graph analysis experience recommended.

**PRICE: \$ 20.00 manual**

**\$190.00**

**TITLE: MONEY BEE I**

**PUBLISHERS NAME: MONEYBEE**

**DESCRIPTION:** Calculates investment performance over various specified time periods and from inception. Adjustments are made for amounts and timing of additions and withdrawals from the portfolio. Evaluates the effectiveness of the investment program and decision making. Comparisons are made with alternative investments in the "Market" and Treasury Bill related Certificates of Deposit. A record is maintained of dividend and interest received, brokerage commissions and margin expenses. Video display and color graphics.

**PRICE: \$69.95**

**TITLE: MONEYBEE IX**

**PUBLISHERS NAME: MONEYBEE**

**DESCRIPTION:** What investments in what combinations may produce your desired investment objective? MONEYBEE IX can put together combinations of stocks, bonds, savings accounts, commodities, CD's, etc. that you specify and determine the resulting combination's effect upon Investment Return, Risk and pure Volatility. It is particularly useful for anyone interested in an investment within a "family" of mutual funds and how various combinations and/or switching may effect the investment program.

**PRICE: \$129.95**

**TITLE: N2 MARKET ANALYZER (TM)**

**PUBLISHERS NAME: FUTURE TECH DISTRIBUTORS**

**DESCRIPTION:** ...an Interactive Graphics Analysis Program that enables you to create and compare indexes and indicators of your choice. It operates with any uniform time series such as Stocks, Bonds, or Futures, and its capability is virtually unlimited. It saves you time and it lets you...

**ANALYZE IN-DEPTH**

**EXPLOIT MARKET DATA**

Optimize Strategies  
Refine Indicators  
Test Theories  
Estimate Trends

Determine Ratios  
Formulate Oscillators  
Calculate Detrends  
Compute Momentums

The N2 MARKET ANALYZER Program includes two serial-numbered diskettes containing the programs and Data Base, and a User's Manual with detailed instructions and illustrative examples. The program is intended solely as an analysis aid and tool that will enable the user to manipulate data and formulate complex indicators quickly and efficiently. The entire risk as to its quality and performance is with the user.

#### Optional Capabilities

Hardcopy Graphics require a "screen dump" capability and a suitable printer. The program is written for The GRAPPLER interface card which incorporates a "screen dump" capability for a variety of printers.

Electronic Updating requires a modem and communications software. The MICROMODEM II and DATA CAPTURE 4.0 are recommended.

PRICE:

#### TITLE: PORTFOLIO EVALUATOR

PUBLISHERS NAME: APPLE COMPUTER, INC.

DESCRIPTION: Maintain up to 50 stock portfolio on a diskette, analyzing each to provide summaries of short and long term gains and losses, current values of each portfolio, and shares held.

PRICE: \$50.00

#### TITLE: PORTFOLIO MASTER 3.1

PUBLISHERS NAME: INVESTORS SOFTWARE

DESCRIPTION: A program designed for the serious investor or investment advisor who needs an efficient way to manage securities portfolios. It provides the necessary data at his fingertips to help make day-to-day decisions for effective portfolio management. Instantly displays daily gain or loss for each security, calculated for long or short term.

Investors Alarm Clock. (Especially for Option Traders.) A signal warns of the impending expiration of all puts, calls, rights and warrants in plenty of time to exercise your options. A report won't let you forget maturity and expiration dates.

Sales Record. When sales are made, they are entered on a sales table along with basis data. Keeps a running total of long and short term gains and losses for tax planning.

Advisors Report Card. Portfolio Master allows you to track the performance of investment advisors. Store their names and recommendations and analyze their record.

Weigh the information. Enter current prices and you will see the current value of each holding, its dollar weight and then the total portfolio value.

PRICE: \$195.00

#### TITLE: STOCK CONTROL SYSTEM

PUBLISHERS NAME: PADMEDE COMPUTER SERVICES

DESCRIPTION:

- \* Stocks items on Stock File
- \* 2000 Postings on Daybook File
- \* Free Stock, Minimum Stock Levels, and Re-order Levels used to reflect stock positions
- \* Details of Customers' Orders to be satisfied

- \* Details of Orders placed on Suppliers
- \* Meaningful Management Reports
- \* Information on Turnover, gross Profit, Values and Orders Outstanding, by Products and Overall\* Full interrogation via screen
- \* comprehensive verification of input

#### REPORTS:

Price list; Basic Product Details; Customer Order Information; Turnover Details; Gross Profit calculations; Stock Valuation; Totals of Free Stock at Cost, Free Stock at selling price, Customer Orders at Selling Price, Supplier on Order at Cost, Gross Profits.

#### PRICE:

#### TITLE: STOCK FORECASTING SYSTEM

PUBLISHERS NAME: URBAN AGGREGATES, INC.

DESCRIPTION: A locked and dedicated group of programs that uses technical analysis to provide specific buy, sell advise. Stock cycles' price momentum and moving averages generate signals to BUY, SELL, SELL SHORT and/or COVER for user selected stocks. Additional momentum gap, relative strength and rank studies are presented to aid selection.

Technical analysis requires extensive data. Stock histories may be easily created from graphs of past price action or manually entered from the keyboard. Current information may be entered manually, from graphs or via modem access to a data bank.

Every effort has been made to simplify data entry. Automatic calendars, alphabetizers, and extensive prompting and error trapping are employed to simplify use. Thirteen of the 15 programs in the system are designed for data file manipulation. Programs in the INVESTMENT DATA SYSTEM have been especially modified, adopted and dedicated to the STOCK FORECASTING SYSTEM.

PRICE: \$175.00

\$ 50.00 annual updates

#### TITLE: STOCK OPTION VALUATION

PUBLISHERS NAME: THE INSTITUTE FOR ECONOMETRIC RESEARCH

DESCRIPTION: The Stock Option Valuation program is an easy to use, completely interactive program that will enable to user to quickly calculate fair market values for put and call options and stock warrants. Values for call options and warrants are derived from the "Merton Model" which is an adaptation of the classical "Black-Scholes Model," developed at the University of Chicago. However, the Merton Model significantly improves upon the Black-Scholes variation by considering the dividend yield of the underlying common stock. Valuation of put options uses the Merton Model as modified by a standard formula such as the proposed by the New York Institute of Finance. To facilitate comparisons and permit construction of spread and straddle positions, the Stock Option Valuation program values two options simultaneously. Total execution time is less than two seconds. Input parameters include the price, dividend yield, and volatility of the underlying common stock, the exercise price of the options and a market interest rate. An accompanying explanatory brochure assists the user in locating volatility estimates for common stocks.

PRICE: \$29.95 Tape

#### TITLE: STOCK OPTIONS

PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA

DESCRIPTION: Follows Black-Scholes model for computing theoretical  
BUS-119



cal value of a call option.

**PRICE: \$24.95**

**TITLE: STOCK PORTFOLIO**

**PUBLISHERS NAME: HOWARD SOFTWARE SERVICES**

**DESCRIPTION:** Records and analyzes price history for individual stocks as well as entire portfolio. Disk based for easy storage and retrieval.

**PRICE: \$19.00**

**TITLE: STOCK PORTFOLIO SYSTEM**

**PUBLISHERS NAME: SMITH MICRO SOFTWARE**

**DESCRIPTION:**

Easy to Use- menu driven plus simple step by step documentation  
Flexible- buy stocks or options, cash or margin, plus control your money market account  
Quick Accurate Reporting- current portfolio status by position, total funds balances, short and long term, plus much more  
Valuable Timing Aids- advance notice of: stocks going long term; dividends coming due; and options expiring  
Complete Records- profit and loss statement; dividend income plus more...all year to date, great for tax reporting

**ABOUT THE SYSTEM**

The STOCK PORTFOLIO SYSTEM is a personal investment accounting, record keeping and control system designed to provide the user with the facts needed to make informed investment decisions.

The system is fully menu driven and designed for the computer novice. The documentation is also designed for ease of use with simple step by step instructions.

Investments may be in stocks or options. Option contracts may also be written on stock included in the portfolio.

SPS manages both Cash and Margin Accounts as well as controls a Money Market Account. The system provides complete reporting of current portfolio values and the various account balances.

Investment timing aids are also provided by the STOCK PORTFOLIO SYSTEM. Notice is provided thirty days in advance of when; Stock positions become long term investments, Dividends become due, and Option contracts expire.

Complete investment record keeping and reporting is provided including reports for Profit and Loss, Dividend Income, and Inter Income and Expense. Reports are also designed to meet the requirements for income tax filing.

The system automatically updates stock positions to reflect stock splits and stock dividends.

SPS can handle up to 150 stock or option positions per portfolio file. Multiple portfolios are handled by simply changing data diskettes.

**PRICE: \$149.95**

**TITLE: STOCK TRACKER (VER. 3.5)**

**PUBLISHERS NAME: H & H TRADING**

**HARDWARE REQUIREMENTS: printer recommended**

**DESCRIPTION:** A powerful, technical analysis system to compute daily buy, sell and hold recommendations on stocks, stock option and commodities using Howard's Volume Force (based on Joseph Granville's On-Balance Volume). Designed and used by registered Investment Advisor. Tabular data files may be displayed on screen or printed on paper.

Enter data by typing it on keyboard. Includes Stock Grapher program for point or bar graphs of price, volume and/or Howard's Volume Force on screen or paper.

**BUS-120**



Fully compatible with the Point of Sale and Bill of Materials packages from Solidus International Corporation.

**PRICE:**

**TITLE: STOCKFILE (MULTI-USER)**

**PUBLISHERS NAME: SOLIDUS INTERNATIONAL CORP.**

**DESCRIPTION:** Retains the features of regular STOCKFILE. Additionally, it provides the capability of accessing the same inventory data from a number of different locations.

System consists of a Central Apple and up to four Stations connected to the Central machine. Each Station may operate independently and be up to 100 feet from the Central machine.

The Central machine may also be used to run various STOCKFILE functions independently of the Stations.

The user may lock out specific Stations (or the Central machine) from various STOCKFILE functions, blocking certain machine from certain kinds of access. Without lock, any Station may perform any STOCKFILE function except backup, index creation, or sorting. Any machine (Central or Station) that has a printer attached may print any report or perform any functions which automatically prints a listing, unless that machine is locked out by the user.

Each MULTI-USER package includes:

- \* Two Communications Boards

- \* An installation and conversion disk

- \* Documentation to be added to the STOCKFILE manual

Existing users of STOCKFILE may easily expand to the MULTI-USER system without modifying inventory data in any way. The disk that is included with the system will convert existing STOCKFILE installations to MULTI-USER operations.

**PRICE:**

**TITLE: STOCKMAKER**

**PUBLISHERS NAME: SOLIDUS INTERNATIONAL CORP.**

**DESCRIPTION:** Have you got sufficient stock to make 30 of Assembly X, 20 of Assembly Y? These and other production questions can be answered by the BILL-OF-MATERIALS package, Stockmaker. This system allows you to create assembly lists that are made up of sub-assemblies, which are made up of parts, and so on. Then you can plan a tentative production schedule, combine and recombine items until you achieve the best allocation of your inventory.

Once you've determined which assemblies to make, Stockmaker, will place "on reserve" all the items that go into these assemblies. Upon completion of the assembly, the parts are automatically removed from inventory. The cost of any assembly can be quickly determined, with automatic updating of pricing reflected into all assemblies, and production history reports may be printed at appropriate intervals.

Stockmaker interfaces with Stockfile so if you're already using Stockfile, just enter your assemblies with the parts that make them up, and discover the power of a truly integrated system of inventory management.

**PRICE:**

**TITLE: STOCKSELLER**

**PUBLISHERS NAME: SOLIDUS INTERNATIONAL CORP.**

**DESCRIPTION:** Holds up to 1750 customers, accesses any of these in less than two seconds, and interfaces with STOCKFILE to immediately remove items sold from inventory. Produces invoices, credit memos, quotations, packing slips, receiving records, and keeps complete sales statistics.

The system provides sales order entry and continually reminds you

of backordered item.

Provides automatic aging of receivables, statements, mailing labels, and complete sales analysis by customer, sales representative, product category, invoice classification and date. Up to three categories of taxation can be applied to sales. Discounts can be given for individual items or the entire invoice. Differing levels of discount can be assigned to sales personnel.

Keeps a running total of cash-in-drawer, handles returns, payments on account or in advance, and produces a daily sales summary of all transactions by your selected category.

You can design your own documents or use your own pre-printed forms. Your sales analyses can be printed in any sequence you wish and you can print both monthly and year-to-date history reports.

You can add service, freight or other charges, and design special functions (up to 99) to automatically handle bulk sales, combinations, or other normally tricky operations.

Machine requirements consist of STOCKFILE requirements plus one disk drive. A comprehensive manual describes the operations of STOCKSELLER, leads you through the installation procedures, and provides you with the necessary information to ensure comfortable and effective operation.

**PRICE:**

**TITLE: TECHNI-TRAC**

**PUBLISHERS NAME: GUARDIAN SOFTWARE**

**DESCRIPTION:** An investment selection system which evaluates stocks and generates buy/sell recommendations for stocks and options. Recommendations are based on sophisticated trading techniques designed to maximize profits and limit losses. The investor enters daily price and volume information which are analyzed to determine an optimal trading strategy. The stocks that meet the investment criteria and automatically screened and highlighted. Prices at which stocks/options should be bought and sold are directly specified and revised daily. An Investor's Guide to stock selection and investment decision making is included with the package.

**PRICE:**

**TITLE: THE COMPUTING INVESTOR**

**PUBLISHERS NAME: MICROCOMPUTING RESEARCH**

**DESCRIPTION:** ...designed for individual analysts of the stock market whose profit goals require performance at the level of professional analysts.

A. QuikFolio- A Free Sample Portfolio Evaluator. Provided to any individual sending a 5 1/4" floppy disk that will accept the Apple II+ DOS 3.3 format. Gives total worth, \$\$ and % gain/loss.

B. FotoFolio- A Picture of Portfolio Status. You view 7 evaluations which visually emphasize balance (or lack of it) in folio gain/loss in various holdings, relative worths, annualized gains, tax-holding times, etc., plus statistic tables, each perspective, and "what-if" projections.

C. QuotePro(cessor)- A Quotebase Manager. You enter weekly quotes (8ths or decimal). QuotePro builds full year quotedisks to display any stock's quotestream as a quarterly-oriented "quote-calendar" or pt.-&-figure "reversal bargraph" (color or B/W). Also adjusts splits and goes to back-year quotedisks automatically, prompts weekly updates.

D. ChartPro(cessor)- A Price-Volume Chart Generator. You enter daily (or save daily costs of modem updates). color (or B/W) hi-

resolution bars show daily action for 3 months; weekly for 15 months- automatically condensing and saving on disk weekly price/vol. ranges as they age. Key commands let you draw trendlines, trailing averages, check specifics.

E. Momentum-M- An Equity Momentum Monitor. You enter weekly quotes giving buy/sell levels. Momentum-M- quantifies weekly changes, relative to each stock's prior moves, approach of earnings, bull/bear market; to re-adjust up/down indicated buy or sell prices to new support/resistance; preventing your buying too dearly or selling too cheaply. Prompts EPS.

F. Transactor- A straightforward stock account manager. You enter an open buy or sell order when placed, and each actual purchase or sale of a share-lot. Transactor shows status, prompts pairing of partial holding shares, builds closed (completed) list for IRS- year end needs (sorting chronologically), gives running cash balance.

G. StockSheets- Research Files Manager. You enter ticker symbol of a company you are researching; its "stocksheet" of your past notes is shown in a 4-page layout: basic statistics (PE, net each qtr., by date due, buy/sell goals, etc.), published news (by date), your opinion notes, and a critical-dates "tickler" page. Easy update.

H. Vector-S- A Predictive Trading Model. You enter weekly closes on each stock in several groups you are watching to buy or sell. Support/resistance prices are re-figured, converted to screen graphics, along with major peaks and lows, and an animated chart of each stock appears, with the dynamics of changing up/down momentum swinging as a predictive vector, alerting you to probable price trends.

**PRICE: Small Investor's Sampler (A. & B.): \$49.00**

**The Technical Investor (C, D & H): \$149.00**

**The Weekend Investor (C. & E): \$99.00**

**The Investor's Aide (F & G): \$99.00**

**The 'Compleat' Computing Investor (all above as 3-disk integration): \$299.00**

#### **TITLE: THE SMART ANALYSIS AND GRAPHICS PACKAGE**

**PUBLISHERS NAME: SOFTWARE RESOURCES, INC.**

**DESCRIPTION:** The SMART (Securities Market Analysis, Reporting and Transaction) Analysis and Graphics Package is a comprehensive and integrated set of computer based tools for serious investors. Designed to run on the Apple family of computers, it provides the capability to graph and analyze a great range of securities data such as stocks, bonds, commodities, options, mutual funds, and related economic indices. Historical and daily updated data is available automatically over the telephone line from Software Resources, Inc.'s data service. Data can also be entered manually into the system.

SMART can generate all types of charts in seconds with a single keystroke. A variety of charts, including open high low close bar charts, line charts, and volume histograms can be displayed in overlay or split screen format. Charts can be printed immediately or stored for future use. Analytic functions are presented in a flexible format. Built in functions include exponential smoothing, simple and weighted moving averages, and on balance volume. Any analysis method can be modified and new formulas can be easily designed by the user and made a permanent part of SMART, without the need for any programming. Almost every major important analysis technique which the experts have developed is incorporated.

Advanced features such as descriptive statistics and regression analysis are also at the investor's disposal. Additionally, SMART provides prompt, clear, and concise portfolio monitoring

reports. Commands are simple to use; no computer background is needed.

With the MACRO feature, repetitive time consuming tasks can be performed with a single command. SMART will dial the data source, update the data, run analyses, prepare and print charts for any combination of securities, without intervention.

SMART is a dynamic, evolving, growing product; clients receive periodic updates and improvements and are encouraged to recommend new enhancements.

**PRICE: \$1400.00**

**TITLE: TRADER**

**PUBLISHERS NAME: CHEMRON SYSTEMS, INC.**

**DESCRIPTION:** For financial instruments, metals, grains, and ag' and building products. Gives you signals in up and down-trending markets. Simple, user-tested. No prior computer knowledge needed.

Complete, easy-to-follow directions included. Requires Apple II, monitor, 1 disc drive. Diskette includes programs to calculate system parameters, relative strength index, creation/updating of data files and display of contents, action indicators, daily summary of each investment's equity, and total for diversified portfolio. Enter your daily data quickly, and run it!

**PRICE: \$185.00**



## TAXES

### TITLE:

ESTATE TAX PLAN

PUBLISHERS NAME: AARDVARK SOFTWARE

### DESCRIPTION:

GROSS ESTATE displays the elements of the gross estate. The computation includes adjustments for property received via the marital deduction (including growth between the spouses' dates of death), fights made within three years of death, and any reduction in value for special use property.

ESTATE TAX LIABILITY displays the gross estate, deduction to arrive at the taxable estate, and the resultant estate tax liability. The program automatically selects the appropriate year's rate schedule and unified credit. Adjustments for gift taxes state death tax credit are also made.

PRESENT VALUE ANALYSIS OF DEATH TAXES displays the present by the user. The program automatically computes the present value between the date of analysis and the assumed date of death of a single payment of a series of annual payments.

DEFERRED PAYMENT OF DEATH TAXES includes two printouts. The first displays the extent to which the client (or spouse) can defer payment of the federal estate tax liability on sole proprietorships, partnerships, or corporations under IRC Section 6166. The second displays the the series of principal and interests payment.

LIQUIDITY ANALYSIS displays estate liquidity. Liquid assets or cash needs, not included as part of the taxable estate, can be included in this analysis.

CAPITAL GAIN - IRC SECTION 303 displays the extent to which the client (or spouse) can redeem shares of stock in a closely-held corporation at capital gain rates under IRC Section 303.

SPECIAL FUNCTION KEYS Special function keys allow you to compute compound or simple interest increment dollar values, or input data for client or spouse, in any order.

REVISIONS Should material changes in federal tax law occur during a calendar year. Aardvark Software will make a revised program available to current-year users.

ANNUAL UPDATED Each year an updated program, reflecting changes in tax law and including program enhancements, will be made available.

SUPPORT -- ESTATE TAX PLAN is supported directly by Aardvark Software and its staff of tax and computer professionals, with a continuing commitment to customer satisfaction.

ESTATE TAX PLAN allows you to solve complex estate tax planning problems in minutes rather than hours. The program, designed for accountants, attorneys, insurance agents, trust officers, and financial planners, is written so that even if you have never used a computer, you will find the program easy to use.

The program permits you to analyze up to four different fact situations simultaneously. Assumptions, such as the amount of property passing via the marital deduction, the amount of property bequeathed to a charity, or the sequence of anticipated deaths, can be entered quickly. Once all relevant data has been entered, calculations are performed in less than two minutes. regardless of the complexity of the case. You can then view the alternative results on the screen or produce a printout suitable for client presentation.

The program also allows you to save data on diskette. Therefore, when your client notifies you of last-minute changes, you need only enter the new data and recalculate immediately. In most instances, changing a fact situation will require less than five minutes of your time.

AUTOMATIC COMPUTATIONS

ESTATE TAX PLAN calculates the federal estate tax liability for tax years 1982 and thereafter, using the appropriate tax rates and unified credit as modified by the Economic Recovery Tax Act of 1981.

#### DATA ENTRY

ESTATE TAX PLAN contains 89 inputs. To simplify data entry, worksheets to organize and summarize your data are included with the program to save time, the program allows you to select only the inputs you need and ignore the others.

Included amount the inputs are the following:

- \* Marital deduction codes (dollar bequest, maximum, "zero tax" and exact tax equalization);
- \* Growth rate assumption for marital deduction property;
- \* Outright and split interest bequests to charities (including charitable lead trusts, charitable remainder annuity trusts, and charitable remainder unitrusts);
- \* Up to four separate dates of death each, for the client and spouse;
- \* Special use valuation reduction;
- \* Present value assumption;
- \* Multiple businesses (including ownership percentage for each);
- \* Separate values for estate property.

After Data entry is completed, inputs may be printed to verify the data entered.

ESTATE TAX PLAN was developed under the supervision of Dr. William A. Raabe, CPA.

#### PRICE:

#### TITLE: HAYES FEDERAL TAX VISICALC TAX TEMPLATES

##### PUBLISHERS NAME: HAYES COMPUTER SYSTEMS

DESCRIPTION: Visicalc based federal income tax program- fast complete tax program which computes 1040, pages 1 and 2, schedules a, b, c, d, e, f, g, se & 4562. Also available is the North Carolina state D-400, pages 1 and 2. Schedules are printed out on federally approved format. 1040 and D-400 are printed out in over lay format or may be printed directly on forms.

PRICE: Federal & Schedules, only.....\$300.00

Federal, Schedules, & NC.....\$350.00

#### TITLE: INDIVIDUAL TAX PLAN

##### PUBLISHERS NAME: AARDVARK SOFTWARE

DESCRIPTION: INDIVIDUAL TAX PLAN, developed by CPA's with over 17 years of "Big Eight" tax experience, is a program designed to meet the needs of the professional tax practitioner. The program allows you to spend more of your time finding creative tax solutions for your clients, rather than simply performing tedious, time consuming manual computations. Calculations which normally take hours can now be performed in seconds, with computer accuracy.

The program permits an analysis of the tax effects of up to five different fact situations simultaneously. You can immediately see the tax effects of changes in income and/or expense items, save fact situations on diskette for later review or change, and print results in a letter-quality format for permanent record or client use.

When deadlines are near and your client calls with last-minute information. INDIVIDUAL TAX PLAN allows you to add or change data within seconds. Results of these changes can be seen almost immediately.

This program, coupled with a low-cost microcomputer, will pay for itself and the computer in less than one year. Plus, the computer can be used for other time-saving programs, enabling you to

spend more time developing new clients.

#### AUTOMATIC COMPUTATIONS

\* Federal tax liabilities for tax years 1981 through 1984 (using appropriate tax tables or rate schedules, income averaging maximum tax on earned income, and the "Special Rule" for Post 6/9/81 qualified net capital gain), with selection of the lowest tax due.

\* Projection capability.

\* Minimum and alternative minimum tax, including the 1981 limitation on qualified net capital gain.

\* Ten-year averaging for lump-sum distributions.

\* Two-earner married couple deduction.

\* Charitable contribution, medical expense, capital loss, and investment interest expense limitations.

\* Capital gain deduction.

\* Indexing for tax years 1985 and thereafter.

#### ENTRY OF TAX DATA

\* Screen messages prompt you through all phases of data entry.

\* You may enter tax information for both taxpayer and spouse.

\* You may enter or change tax data in any order.

\* Special function keys allow you to input incremental dollar amounts or percentages of base period amounts.

\* The program automatically duplicates tax inputs for multiple alternatives/projections.

#### CALCULATIONS

\* Calculations are performed in less than one minute, regardless of complexity.

#### PRINT OR DISPLAY RESULTS

At your option, results can be displayed on the screen or printed for permanent record. Note See sample printout on side flap of this brochure.

#### REVISIONS

Should material changes in federal tax law occur in a calendar year. Aardvark Software will make available revised programs reflecting these changes. Revisions will cost \$50.00 and can be obtained from local Aardvark Software dealers.

#### ANNUAL UPDATED

Updates reflecting changes in tax law and including program enhancements will be made available on or before November 1st of each calendar year for 45% of the then-current retail price.

#### SUPPORT

INDIVIDUAL TAX PLAN is supported directly by Aardvark Software and its staff of tax and computer professional with a continuing commitment to customer satisfaction.

#### PRICE:

#### TITLE: MICRO TAX/SERIES

#### PUBLISHERS NAME: AARDVARK SOFTWARE

DESCRIPTION: In an era when computers are an integral part of business and entertainment, and computer software is more and more sophisticated, Aardvark is yet another breed in advanced computer software. Aardvark's Micro Tax series is a true user-oriented Federal Income Tax package. Specifically developed by qualified tax professionals for use on personal home computers, this low-cost, time saving Aardvark Micro Tax package accurately and efficiently computes your federal income tax liability. Aardvark will display and fill in facsimile Form 1040 and related schedules and, when connected to a printer by means of a standard interface, will print out these facsimile forms automatically. Each program is designed to use the appropriate tax table or rate schedule. The Aardvark package includes an indexed instruction manual and input forms for easy input of tax data. To see how



Aardvark can be tax-deductible, check the instructions in the binder of the manual. You can also use the binder to store pertinent 1979 tax records.

#### MICRO TAX I

MICRO TAX I	MICRO TAX II	MICRO TAX III
Form 1040	Form 1040	Micro Tax
Schedule A	Schedule A	Schedule C
Schedule B	Schedule B	Schedule D
Schedule TC	Schedule G (Inc.Avg.)	Schedule E
(will not calculate	Schedule TC	Schedule SE
Income Averaging, Mar	Form 4625 (Min.Tax)	Form 2119-Sale of
Tax, or Alternative	Form 4726(Max.Tax)	Personal Residence.
Minimum Tax)	Form 6251(Alt.Min.Tax)	

#### MICRO TAX IV

Expanded disk version  
of Micro Tax III  
Printed forms can be  
filed with the IRS

#### MICRO TAX V

Expanded disk version  
of Micro Tax III plus  
Form 2210  
Provided for hash totals  
and batch processing  
Printed forms can be  
filed with the IRS

#### PRICE:

#### TITLE: PERSONAL TAX PLAN

#### PUBLISHERS NAME: AARDVARK SOFTWARE

DESCRIPTION: PERSONAL TAX PLAN was developed by CPA's to help the home user calculate the tax effects of personal or investment decisions. The program allows you to solve complex income tax problems in minutes rather than hours.

Important tax questions (e.g., "Should I file married - joint - or married - separate?", "How much do I save by using income averaging?" or "How much will we really benefit if my spouse returns to work?") can now be answered in minutes.

PERSONAL TAX PLAN allows you to easily enter tax information and perform "What If?" calculations. The resultant tax liability can then be viewed on the screen or printed for permanent record.

PERSONAL TAX PLAN will be a valuable, timesaving tool, not only at tax time, but throughout the year.

#### SIMPLIFIED DATA ENTRY

- Screen messages guide you through all phases of the program.
- "Help Screens" are provided for all tax inputs.
- Worksheets to organize and summarize tax inputs are included with the manual.
- Tax data for client and spouse can be entered or changed in any order.
- Input can be printed to verify data entry.
- Special function keys allow you to compute compound or simple interest or increment dollar values.

#### AUTOMATIC COMPUTATIONS

- Federal tax liability for tax years 1981 through 1984 (using appropriate tax tables, rate schedules, income averaging, etc.)
- Medical expense, capital loss and charitable contribution (50% charities) limitations
- Two-earner married couple deduction
- Capital gain deduction
- Multiple year projections or multiple alternatives for a single year.

#### CALCULATIONS

Calculations are performed in less than one minute, regardless of complexity.

#### PRINT OR DISPLAY RESULTS

At your option, results can be displayed on the screen or printed



for permanent record.

**PRICE:**

**TITLE: SHORTAX**

**PUBLISHERS NAME: ADVANCED SOFTWARE TECHNOLOGY, INC.**

**DESCRIPTION:** Syntax Corporation, developer of SHORTAX, has received excellent response and reviews to this package.

#### **WHAT IS SHORTAX ?**

SHORTAX is a forecasting and planning tool for creative tax planning. Tax planning is the process of changing your business, investment, and family situation to result in lower taxes and more cash to spend.

This program can pay for your entire computer system.

Use the SHORTAX income tax planning program for creative tax planning and use the taxes you save to pay for your computer. A tax preparation program is to help you pay your taxes. An income tax planning program will help you to reduce your taxes. SHORTAX is a year 'round program for creative tax planning to find opportunities to find legal ways to pay less taxes. It is written to simplify and speed up the task of estimating the tax savings from different "WHAT IF?" situations.

#### **WHAT IF ?**

You incorporate your business?  
You file separate tax returns?  
You make an interest free loan to you college age child?  
You invest in a tax shelter?  
You amend a prior year's return?  
Your spouse takes a job?  
You put income producing assets into a trust for your children?  
You start a part time business?  
You switch from a savings account to tax exempt municipal bonds?  
You operate a small business as a family partnership?

#### **HOW MUCH IS IT WORTH ?**

All of the questions listed above involve ideas to help you pay less income and payroll taxes, but how much will each idea really save you? To save taxes with tax saving strategies, you need a way to compute the actual cash tax savings before and after. SHORTAX does the tax computations, quickly and accurately for six tax years from 1979 through 1984.

#### **A SUMMARY OF SHORTAX FEATURES**

- \* Six tax years in one program. From 1979 through 1984
- \* Computes taxes for trusts, individuals and corporations
- \* Computes regular taxes
- \* Income averaging tax
- \* Add-on minimum tax
- \* Alternative minimum tax
- \* Two income deduction
- \* Menu driven
- \* Built in help messages
- \* Extensive error trapping
- \* Top rating by InfoWorld

SHORTAX was designed and is supported by Vernon Jacobs, a

nationally known tax consultant, editor of the Tax Angles newsletter, and a tax writer for Computer Retailing.

\*\*\*\*\*  
\*  
\* It isn't what you make, but what you keep that counts. \*  
\*  
\*\*\*\*\*

#### TECHNICAL FEATURES

##### NOTE:

- \* Runs on an Apple with a Z80 card or CP/M systems using 8" SSSD disk
- \* Available in compiled form
- \* Requires 48K memory

PRICE: \$500.00 initial license fee  
150.00 annual maintenance fee  
75.00 for demo disk with manual  
40.00 for reference manual only

##### TITLE: TAX ADVISOR

PUBLISHERS NAME: MONUMENT COMPUTER SERVICE

DESCRIPTION: The system is based on formulas used in one of the "Big Eight" accounting firms for its clients and it can estimate income from an endeavor and figure the after tax proceeds. It will work for individuals or corporations and you can cycle through alternatives to find the best set up for a new business.

PRICE: \$69.95

##### TITLE: TAX BEATER

PUBLISHERS NAME: DATAMOST

DESCRIPTION: The I.R.S. is dedicated to making sure you don't underpay your Federal Income Tax. They really don't worry about who overpays. Yet, each year tens of thousands of honest taxpayers overpay by a few dollars to many thousands of dollars. The reason? The confusing tax regulations, the various filing methods and the expertise needed to decipher the many choices and options.

Written by an I.R.S. Enrolled Agent, with 24 years of financial and tax planning experience, the TAX BEATER simply, carefully, and quickly helps you discover how to pay the minimum Federal Income Tax!

The easy to use TAX BEATER automatically evaluates up to 120 return options from your input. It searches and finds the most advantageous tax path for you, and can display up to 15 choices, then print out the optimum method so you pay only the minimum! With the TAX BEATER you have a top expert on hand all year long, figuring income averaging to loss carryovers, dividends vs. interest, alimony, pension income, to special exclusions. whatever the I.R.S. needs...the FTAX BEATER is ready to handle, to your benefit.

It's the perfect program for the average taxpayer...and indispensable for the financial professional. It's so complete, so logical that (especially in this interim year of unusual tax revisions) it can easily pay for itself many times over.

Save money. Save time. Save aggravation. Be ready for the I.R.S....with TAX BEATER, the easy to use and understand program that's updated for the latest year's tax laws.

PRICE:

**TITLE: TAX PLANNER**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**HARDWARE REQUIREMENTS:**

**DESCRIPTION:** Tax Planner - an innovative program designed for use with Apple II and II Plus computers - allows you to determine the federal income tax advantages or liabilities that result from personal financial decisions. It provides you with the capability to construct various income scenarios, and then compare the federal income tax impact of each. Additionally, Tax Planner instantly computes the financial consequences of income-affecting decisions for up to nine years in the future. This means you can determine the best time to make a financial move (for example, sell property or take losses on investments). And you can print out your tax strategies, or store them on diskettes, ready for fast retrieval and modification.

Tax Planner - the tool that can help you better manage your personal income and the tax mechanisms that affect it.

**TAX PLANNER...**

- Provides you with the capability to optimize the federal income tax advantages available to you, because it lets you quickly compare the tax consequences of various financial decisions...

- Assists you in choosing the best time to make certain financial moves, by instantly computing their impact on income taxes in current and future years...

- Helps clarify current federal tax regulations, because you can experiment with various financial scenarios and observe how tax mechanisms apply to each...

- Increases your productivity, by allowing you to quickly develop or change tax strategies.

Tax Planner's main menu consists of four options. To begin using the program, select TAX PLANNING. Before tax computations can be performed, you will be asked to provide some information, including how far into the future you wish to plan (up to nine years), and your taxable income for each of the four preceding years. If you choose to plan only for next year, you may specify the number of alternative scenarios to be examined for that year. After you've provided this information, your screen will display the Tax Matrix, a skeletal list of items which affect your federal income tax situation. These include your tax filing status, long and short-term capital gains, income, deductions, and adjustments.

Suppose your base year is 1980 and you wish to do some planning for 1981 and 1982. On the screen, the matrix will display three columns labeled 1980, 1981, 1982. On the screen, the matrix will display three columns labeled 1980, 1981, and 1982. Tax Planner will automatically compute your adjusted gross income, your estimated tax, and your tax bracket, once you've filled in the information above "ADJ GROSS INC."

Setting up your matrix usually requires some time and careful thought. But once it's complete, Tax Planner does all the rest of the work - the tedious tax calculations - for you. To compute your adjusted gross income, taxable income, taxes, and other figures, just press the "C" (for "compute") key. Tax Planner automatically computes your tax by income averaging as well as by the regular method. It also computes the maximum tax on personal service income, the minimum tax on preference items, and the alternative minimum tax. In addition, your tax bracket and the tax computation method most advantageous to you are determined for each year or financial scenario.

You can create a matrix with as many as nine columns, each containing alternative sets of tax data for a single year. Although the screen displays only three columns at a time, up to nine can be stored within any single scenario. (The above example, for instance, could have included up to six additional



years - in all, a tax strategy for 1980 through 1988). The additional columns are moved, or "scrolled", on and off the screen, simply by pressing the left or right cursor movement keys.

With Tax Planner, you can use a matrix to quickly perform "what if" experiments that otherwise would consume hours of tedious calculations. Suppose, for instance, that you're thinking about selling your home, and you wonder if it would be more advantageous timing for the sale.

Once you've developed a tax scenario you want to keep, save it on your diskette by selecting FILE CLERK from the main menu, and following the step-by-step instructions displayed on your monitor. Or choose the PRINTER option to set your printing parameters and print out the strategy.

Because Tax Planner incorporates the current federal tax laws, you can be assured of the validity of its computational results. In addition, if you fill out and mail the user registration card that accompanies the program, Apple Computer Inc. will keep you informed of any product changes corresponding to tax law revisions.

Whether you're a financial advisor who wants to bring the latest technology to bear on your client's tax situations, or an individual with substantial opportunities for advantageous tax treatment of income, you'll find that Tax Planner will become an indispensable tool for quickly generating dollar-saving financial strategies.

To use the Tax Planner, you will need:

- Apple II or Apple II Plus, with a minimum 48K of memory;

- Apple Disk II with controller and 16-sector PROMs;

- Video monitor or television;

- Printer and interface card (optional)

Note: Apple Computer systems work with several printers and appropriate interface cards, including the following:

Apple Silentype Printer

Card: Silentype interface Card (Supplied with printer)

Qume Sprint 5/45

Card: High Speed Serial Interface Card (Apple Product A2B0005)  
Printer IIA (Centronics)

Card: Centronics 779 Printer Interface Card (Apple Product A2B0007, included if printer is purchased from Apple Computer, Inc.)

**PRICE:**

#### **TITLE: TAX PREPARATION**

**PUBLISHERS NAME: AARDVARK SOFTWARE**

**DESCRIPTION:** Aardvark Software Inc. brings you the latest advances in tax preparation with the new Individual Income Tax package. This program can calculate an individual's federal and state income tax liability, and print Federal Form 1040, all lettered schedules (A through TC) and the most frequently used numbered and state forms.

For the convenience of the preparer these forms and schedules are printed in a format approved for filing with the Internal Revenue Service and the appropriate State Department of Revenue.

Designed by computer professionals and CPA's with 17 years of "Big Eight" tax experience, this comprehensive program meets or exceeds the requirements of most professional tax preparers. No special training is required and by simply following the example in the instruction manual, even a novice user can begin to process returns in one hour. The program is both convenient and cost-effective. It eliminates delays and costs for input form sent to outside processing services. Assuming an average process charge to a client is \$20, it takes only 35 processed returns to



recover the software costs for the federal program.  
State programs are available for California, Illinois, Michigan, Minnesota, Ohio and Wisconsin. Programs for other states are also available based upon demand.

PRICE: Federal Program \$695.00

State Program \$300.00

Updates - 1981 and later 60% of current price

#### **TITLE: TAX PREPARER**

**PUBLISHERS NAME: HOWARD SOFTWARE SERVICES**

**DESCRIPTION:** Includes forms most needed by businessmen (Sched C,D,E,F,G,SE; FORM 2106,3468,4562,4797) as well as all the usual forms for individuals (Sched A,B,R&RP,TC; Form 1040, 5695). Powerful disk-based package provides automatic linking of results from all forms and convenient record-keeping as well.

**PRICE: \$105.00**

#### **TITLE: TAX-MANAGER**

**PUBLISHERS NAME: MICRO LAB**

**DESCRIPTION:**

**STANDARD FEATURES**

Tax-Manager is an integrated tax management system for individuals that helps you to reduce your tax liability. It is three interactive modules that work together to give you a complete tax management program.

Tax-Manager allows you to easily enter your tax data for Form 1040 and related schedules (A, B, C, D, E, F, G, SE, R, ES, 2106, 2119, 2210, 2441, 3468, 3903, 4625, 4726, 4797, 5695, 6251). Your tax liability is accurately calculated using the correct tax table or rate schedule.

Looking for more tax deductions? Using a data base of over 800 items. Tax-Manager helps you find those hidden deductions. Simply enter a questionable item and Tax-Manager quickly tells you if it is deductible. Or you can review the entire list by category.

Confused about which tax forms and schedules you should be using? Let Tax-Manager help you. By answering a series of simple questions, Tax-Manager determines which forms and schedules are appropriate for your situation.

**COMPARE OTHER SYSTEMS**

Why buy a system that only does math calculations and computes your tax? Why buy a system that will not help you to reduce your tax liability. We offer a unique system that meets your needs now and will continue to meet them in the future. When tax regulations change, so will Tax-Manager. You will be provided with yearly updates at a nominal cost. The first year with an update is provided in the initial price.

Tax-Manager also prints out an IRS-acceptable form for individuals and unincorporated businesses.

We backup Tax-Manager with a staff of professionals, including CPAs, computer specialists and tax consultants, who use their expertise to help you to reduce your taxes. Most importantly, we provide documentation to educate you in how to best obtain the system's maximum potential.

**PRICE: \$180.00**

# COMMUNICATIONS

ANSWERING MACHINE . . . . .	CM-1
APPLE BULLETIN BOARD SYSTEM/ABBS . . . . .	CM-1
APPLE CAT II . . . . .	CM-1
APPLE TERMINAL . . . . .	CM-2
ASCII EXPRESS II . . . . .	CM-3
AUTO-CAT . . . . .	CM-3
AUTO-MODEM . . . . .	CM-4
B.I.T.S. . . . .	CM-5
BASIC INTERACTIVE TERMINAL SOFTWARE (B.I.T.S.) . . . . .	CM-5
CORVUS MULTIPLEXER . . . . .	CM-6
D-CAT . . . . .	CM-7
DATA CAPTURE 4.0 . . . . .	CM-8
DATA*TRANS . . . . .	CM-8
DATACOMM . . . . .	CM-9
DATALINK . . . . .	CM-9
DISK LOGBOOK . . . . .	CM-9
EASYMOVER . . . . .	CM-10
FIRST EDITION . . . . .	CM-10
FLEXITERM . . . . .	CM-11
HANDICAPPED TYPEWRITER . . . . .	CM-11
HIGH SPEED TERMINAL PROGRAM . . . . .	CM-12
INTELLIGENT KEYPUNCH . . . . .	CM-12
MICRO-COMMUNICATOR . . . . .	CM-12
MICRO-COURIER . . . . .	CM-12
MICRO-TELEGRAM . . . . .	CM-13
MICROMODEM II . . . . .	CM-13
MICROMODEM II DISK . . . . .	CM-14
MODEM MAGIC 2.0 . . . . .	CM-14
NET-WORKS . . . . .	CM-15
OMNINET LOCAL NETWORK . . . . .	CM-15
ONLINE . . . . .	CM-17
OPERATOR . . . . .	CM-17
P.I.T.S. . . . .	CM-18
PASCAL UTILITY MICROMODEM PACKAGE (PUMP) . . . . .	CM-19
PHONE SECRETARY . . . . .	CM-19
PICTURE TRANSFER PROGRAM . . . . .	CM-20
SIGNALMAN MARK I MODEM . . . . .	CM-20
SMARTMODEM . . . . .	CM-20
SNOWATCH . . . . .	CM-21
TELEPHONE TRANSFER PROGRAM . . . . .	CM-22
TERMINAL PROGRAM . . . . .	CM-22
THE CONTEXT CONNECTOR . . . . .	CM-22
THE N.E.X.U.S . . . . .	CM-23
TRANSEND DATA COMMUNICATIONS SOFTWARE . . . . .	CM-23
VISITERM . . . . .	CM-24
VT100 EMULATOR . . . . .	CM-24
WRITE - EDIT & SEND . . . . .	CM-25

**TITLE: ANSWERING MACHINE**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**HARDWARE REQUIREMENTS: Micromodem**

**DESCRIPTION: FEATURES:**

- automatically answers modem phone line with your name
- takes messages
- gives outgoing messages to friends when the call in
- owner can retrieve messages or exit program to BASIC from remote terminal
- displays or prints detailed system log
- has sophisticated security routines

Works well with most clocks.

**PRICE: \$35.00**

**TITLE: APPLE BULLETIN BOARD SYSTEM/ABBS**

**PUBLISHERS NAME: MICRO SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS: 2 Disk Drives**

**DESCRIPTION:** The Apple Bulletin Board System (ABBS) is an Applesoft II program that implements a personal computer based message storage and retrieval system on a 32K or larger Apple II computer. The system is configured to automatically answer incoming phone calls through the use of D.C. Hayes Micromodem II. Once it has answered the phone, the program determines the transmission speed of the terminal or computer on the other end. After providing some information about himself to the system, the caller can then review and/or leave messages on the bulletin board. After completing his session with the system, the caller signs off, at which time the system hangs up the phone to await another call.

The Apple Bulletin Board System is modeled after the Computerized Bulletin Board System (CBBS) developed by Ward Christensen and Randy Suess. Their original implementation is extensively described in the November 1978 issue of Byte Magazine. Most of the functions that they have implemented in their system are implemented in ABBS. In addition, we have added a number of changes to take advantage of certain unique characteristics of the Apple II - D.C. Hayes Micromodem II combination.

Minimum system configuration is:

- Apple II computer with at least 32K RAM Memory.
- Applesoft II ROM card.
- Disk II Subsystem.
- Printer.

D.C. Hayes Micromodem II

Optional Equipment Supported;

Mountain Hardware Clock Board.

**PRICE: \$52.00**

**TITLE: APPLE CAT II**

**PUBLISHERS NAME: NOVATION, INC.**

**DESCRIPTION:** First, the Apple Cat II is a superb direct connect modem. It's full personal communication system with all of those extra features that truly opens up the outside world to your computer. You can access data banks, swap programs, talk with your office computer from home. And do it all in the simplest, easiest, most logical way.

For example: Change Speeds. Choose from standard 110 or 300 baud communications- or 1200 baud that can reduce telephone charges by 75%. The Apple Cat II is also for the deaf community. It has a special 45.5 baud, Baudot coded, Weithrecht modem for communicating with the TDD network.

Automatic functions including automatic dial, answer and disconnect.

Apple Cat II organizes your computer memory for message storage. Incoming messages are held for your convenience. Outgoing messages you've created can be stored, then sent on command. The Serial RS-232 port with handshaking to run your printer is built in. No need for the expense and trouble of a totally separate card.

Built in BSR controller connects directly to your home wiring. Control is at your fingertips or as close as a phone. Add a real time clock and you can use your computer to program and run home appliances, lights anything you power with electricity.

The Apple Cat II PC board plugs into one of the peripheral slots inside your Apple. The small interface expansion module goes on the back of the computer and a ribbon cable connects the module to the PC board.

The telephone handset and holder are mounted on the right side of the frame.

The entire installation should take no more than 5 to 10 minutes.

**PRICE: Apple Cat II: \$389.00**

**Expansion Module: \$39.00**

**Handset: \$29.00**

**BSR Control: \$19.00**

**Cassette Rec Cable: \$5.00**

**Touch Tone Receiver: \$99.00**

**Firmware: \$29.00**

**Deaf Firmware: \$29.00**

**Software Disk: \$29.00**

#### **TITLE: APPLE TERMINAL**

**PUBLISHERS NAME: MACROTRONICS, INC.**

**DESCRIPTION:** Terminall now is available for Apple II! Terminall T2 is a hardware and software system which converts your Apple II computer into a state of the art communications terminal. Simply insert the interface card into any available card slot (1-7) in your Apple, then plug the attached cables into your radio.

**Simplicity:**

Terminall was designed from the outset to be easy to connect to your radio and easy to use. Plug into your receiver headphone jack and copy Morse Code or radioteletype (RTTY). Plug into your CW key jack and send Morse Code. Attach a microphone connector and send Raudot or ASCII RTTY using audio tones (AFSK). That's all there is to hooking it up.

The software is loaded into your computer from disk. Enter your callsign and the time and you will start receiving immediately. No settings or adjustments are necessary to receive Morse Code, it's fully automatic and it works! you may type your message while receiving or transmitting.

You will be on the air, receiving and transmitting in any mode, in minutes. As we said, Terminall is simple.

**More for your money:**

Terminall has the RTTY terminal unit-demod and AFSK built in. This results in a lower total cost.

Fantastic Morse reception. Six stage active filter demodulator copies the weak ones. Auto adaptive Morse algorithm copies the sloppy ones. Received code speed displayed on status line.

Outstanding documentation. Professionally written, 90 page user manual contains step-by-step instructions.

Built in, separate, multi-stage, active filter RTTY and CW demodulators. No phase lock loops. RTTY demodulator has 170 and either 425 or 850 Hz shift keyboard selectable - and uses either the panel meter or scope outputs for easy tuning. Copy the weak ones. Copy the noisy ones. Copy the fading ones.

Built in crystal controlled AFSK. Rock stable for even the most demanding VHF or HF applications. A must on many VHF RTTY



repeaters.

Built in 110 or 220 volt AC power supply.

Built in parallel printer driver software. Simply attach a parallel ASCII printer (e.g. the EPSON MX-80) to your printer port to obtain hardcopy in all modes.

Multi level displays- allows examining and editing of historical text.

Word wrapping, word mode editing, diddle, ignore carriage returns, user programmable end of line sequence, adjustable carriage width, multiple user-defined WRU, transmit delay (fixed, none or auto adaptive), break mode and more!

The all-in-one Terminal design makes it great for use on HF or VHF, Ham, Commercial, SWL or MARS! SWL's: Terminal may be jumpered for either 425 or 850 Hz reception to copy news and weather services.

**PRICE: \$499.00**

#### **TITLE: ASCII EXPRESS II**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** The ASCII EXPRESS is the most complete, intelligent terminal package for the Apple II. It is fully compatible with the D.C. Hayes Micromodem II and the Apple Communications Card. It fully supports upper/lower case text both from the Apple II keyboard as well as its display.

With this package your Apple can talk to just about anything that has dialup access, from another Apple II to mainframe systems! It features file oriented upload/download facilities, a built in line editor with full editing functions as well as support for your printer and keyboard macros in the terminal routine.

Also included are support programs to help you convert Apple II programs, (Applesoft, Integer and binary) to their file form. Fast machine language "crunching" is used to compress program files to their minimum size to save online time.

#### **FEATURES:**

Autodial and answer capabilities when used with the D.C. Hayes Micromodem II.

Full upper/lower case text, keyboard and display!

Programmable keyboard macros reduce complicated lot-in procedures to a few simple keystrokes. A must for optimal use of online time.

Files can be transferred to or from any type of system, personal or mainframe. Special Copy Mode records anything displayed on the screen into your user file.

Can accommodate approximately 20K of data in memory. Stores and retrieves files from disk.

#### **LINE EDITOR:**

Fully upper/lower case, 10 to 25 columns, visible control characters.

Insert and Delete functions for blocks of data within file.

Individual line editing: replace, insert, delete, append to beginning or end of lines, auto centering.

Disk file handling allows load/save of new file or appending data onto existing files either in memory or on disk.

System requirements: 48K Apple II, disk w/FP ROM or language card. Lower case display board recommended.

**PRICE: \$59.95**

#### **TITLE: AUTO-CAT**

**PUBLISHERS NAME: NOVATION, INC.**

**DESCRIPTION:** The AUTO-CAT is Novation's price/performance champion in a low cost, auto answer, FCC approved, direct connect modem. Not only does AUTO-CAT communicate data over all

telephone networks but it will automatically answer each call. This feature offers users unattended operation of personal or business computers and terminals. Now, data can be made available 24 hours a day. With AUTO-CAT, business executives can communicate with their office computers in the evenings, on weekends, even on holidays or vacations. And hobbyists can access their home computers from across town or across the world, wherever there is a phone. AUTO-CAT has all the most wanted features. It is compatible with any Bell 100 series modem. That includes Novation's famous CAT acoustic and D-CAT units with data exchange up to 30 characters per second. The low power operation allows AUTO-CAT to be responsive to calls round the clock. Pressure sensitive switches can be set at the slightest touch to control its answer or originate operations. Reliable LED's give constant unit status and even pulsate during major modes of operation including a complete self-test. AUTO-CAT's low profile case fits attractively under your telephone with all controls easily accessible. The compact power supply plugs directly into wall outlets, reducing heat and voltage hazards. Put your best assurance of quality and performance is that AUTO-CAT is from Novation, the recognized world leader in personal communications.

**PRICE:**

**TITLE: AUTO-MODEM**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Allows for "turnkey" use of the D.C. Hayes Micromodem II. User may select from the following menu:

1. AUTO-DIALER
2. AUTO-ANSWER
3. AUTO-CALLER
4. AUTO-MESSAGE
5. SELF-TEST
6. FILE MAINTENANCE
7. QUIT

AUTO-DIALER may be used for one keystroke dialing of Bulletin Boards such as Net-Works described below or any other system equipped with modem capabilities. Information for the numbers to be called must be put on the system via option 6, file maintenance, when Auto-Dial takes over and beeps at you when your connection has been established and is ready for you to begin.

AUTO-ANSWER is handy for new users to get acquainted with the modem without typing up a bulletin board or spending money on connect time. Allows the user to leave his system up and ready to receive calls from another modem. When a connection is made, the Apple will page the user with a series of beeps, inform the incoming caller that he has made connection with the user and request the name of the incoming caller.

AUTO-CALLER augments the program called "PHONELIST" which is supplied with Apple's DOS 3.3. After Auto-Caller is implemented, it may be used to have your modem dial any of the numbers on your phonelist file and the Apple will kindly beep at you to tell you your call has been placed and to pick up the receiver for verbal communication.

AUTO-MESSAGE allows your modem to take messages for you in your absence. The caller will be informed you are out, asked to identify himself, and offered to leave a message (via modem) which will be sent out to disk and may be recalled by the user at his convenience.

SELF TEST is the program supplied with the D.C. Hayes manual. The program is already keyed in for you and debugged such that you can trust the results if an error is detected.

FILE MAINTENANCE is used to customize your Auto-Dialer system

with your name, configuration, and names and numbers for Auto-Dialer, with options to add, change, and delete.

QUIT allows you to escape from Auto-Dialer and move on to another applications.

PRICE: \$39.95

**TITLE: B.I.T.S.**

**PUBLISHERS NAME: SOFTWARE SORCERY, INC.**

**DESCRIPTION:** "B.I.T.S. is perfect for the most common data communications work up to 300 bps." said Frank Derflex in the September 1980 Kilobaud Microcomputing. "Novices in data communications should have no problem installing the software and using it...." You can copy up to 30K and save it on disk as a new file or add it to an old file, or you can print it. Since data is saved as a sequential text file, it can be edited by many word processors, manipulated by your own program, or EXEC'ed into memory to become a program. Text files from your disk can be sent to another system a line or a character at a time. R.I.T.S. is compatible with the 40 column screen with or without lower case, and four of the most popular 80 column boards: Advanced Logic Systems' Smarterm, (TM) Videx Videoterm (TM), M & R Sup'R'Term (TM), and Double Vision (TM) from The Computer Stop. For a modem, choose from this list: Hayes Micromodem II (TM), Apple's Communications Card, AIO from SSM, and the CCS 7710A.

PRICE: \$44.95

**TITLE: BASIC INTERACTIVE TERMINAL SOFTWARE (R.I.T.S.)**

**PUBLISHERS NAME: MICRO SOFTWARE SYSTEMS**

**DESCRIPTION:** The R.I.T.S. package allows you to use your Apple II\* and your D.C. Hayes Micromodem II or Apple Comm Care/Modem as a very intelligent terminal that can communicate with other systems over the telephone line at 110 or 300 baud ASCII.

While you are connected to the other system, the software maintains a large copy buffer. (32K in a 48K system). You can at any time copy all data going thru the modem into the copy buffer, and then store it out to disk as a standard TEXT file.

A 32K buffer is capable of holding about 20 typewritten pages of data. Files larger than 32K can often be transferred a piece at a time by pausing the output to the other system, (usually with a Control-S), saving the buffer,, and restarting transmission.

At any time, you can transfer any text file on your disk to the other system. Provision is made for transferring a character at a time for slow systems, or a line at a time for packet switching networks. Provision is also made for handling systems that send back input prompt characters.

**FEATURE SUMMARY:**

Applesoft autodial program including a program to maintain the auto dial library. The current list of active A.B.B.S. systems is supplied as the initial autodial library.

System support programs to convert Integer, Applesoft and Machine Language programs into TEXT files. Also included is a fast file print, and space compression programs.

File transmit capability.

Large Copy buffer. Buffer commands include:

Copy on, Copy off, Save Buffer, Clear Buffer.

Full/Half duplex and 110/300 baud operation.

Leave and return to program without losing connection.

Line formatting, to prevent words from being broken between line on the screen. This package was written as a Machine Language program, with BASIC initialization routines for speed and flexibility, and has been tested extensively on systems ranging from the Apple Pulletin Board System thru large timesharing



networks such as the SOURCE.  
PRICE: \$34.95

**TITLE: CORVUS MULTIPLEXER**

**PUBLISHERS NAME: CORVUS SYSTEMS**

**DESCRIPTION:** Interconnects up to 64 personal computers in an interactive multi user network. Recent development have lowered the cost of microcomputers- and the cost of the computations they perform- to the point where they are often less expensive than mass data storage and data communications. Capitalizing on this trend, the Corvus Multiplexer puts the full power and versatility of these low cost computers at the front end of the network. Each station has full power, yet has the ability to share costly peripherals, such as mass storage, printers, plotters, or graphic displays. With the Multiplexer, each computer enjoys high speed access (at 60,000 bytes per second) to up to 80 million bytes of online Corvus hard disk capacity.

The Multiplexer network is a proven product now in use worldwide for a variety of applications, such as word processing, accounting, retail stores, education, medical offices, and order processing.

The Multiplexer network is not only multi user, it is multi function. This means that the entire system does not have to be dedicated to one application, such as word processing. In fact, a complete multi station word processing group can share the large Corvus data base with several other applications such as accounting, inventory control, management information, order processing, or financial planning. With up to 80 megabytes of mass storage to draw from, a wide range of applications can be supported by a Corvus Multiplexer network, at a fraction of the cost of a large mainframe computer system.

Technically, the Multiplexer is a back end local network in which multiple computers are connected in a star configuration. To assure compatibility and future expandability, each computer interface uses the standard Corvus bus, the same as that employed in the Corvus disk system and the Mirror backup.

At the center of the star is the Corvus Multiplexer host multiplexer. This central node contains hardware that polls up to eight computers in a round robin fashion. For larger networks a multi level system is set up with one to eight host multiplexers (each supporting up to eight computers) connected to the master multiplexer. Thus total network capacity is 64 computers.

A Zilog Z80 microprocessor is the heart of the Corvus controller. It features direct memory access hardware to control the Winchester disk(s), the multiplexers, and the Mirror Winchester backup. It also provides the software that controls data protection and communication.

This hardware system allows each computer to access the disk system as if it were the only computer attached. The software controlling the Multiplexer manages the shared medium, preventing the computers from unintentionally using the same area of the disk.

Standard Operating Systems- A major advantage of the flexible Multiplexer software is that it allows each computer to continue to use its own native operating system without modification. Typical operating systems are single user, file oriented types, such as CP/M, UCSD Pascal, or BASIC. To permit easy interface, the Multiplexer provides I/O drivers for all supported operating systems. Each I/O driver contains a mount table which designates areas on the disk which that specific computer is allowed to access.

This mount table also contains a variable for each area. This



tells whether the computer can write to the area, read from the area, or is to be denied access to the area.

A volume that can be read but not written on by all computers is called a system volume. Personal volumes are those accessible only by a specific computer as referenced by its own mount table. Shared volumes are available in a read/write mode to more than one computer.

#### Multi Level Security

Multiplexer security has several aspects. One is access control. For example, access for CP/M systems uses a floppy disk drive at every computer. Each person wishing to access the system has a disk to boot the system, which serves as a physical key. A user can give someone else access by handing over the key.

Another access scheme (used in Apple DOS and Pascal) operates by providing utilities- passwords- to modify the mount table. This provides a somewhat stricter security because it limits access to specific people not just to specific computers. The utilities can modify a user's mount table only after determining who the user is and whether he knows the correct password. A special file lists which users can access which volumes. One user is designated the system manager. This is the only person who can change the privileges of other users. When the computer boots, a log in program checks the person's identity and gives him his mount table, as set by the system manager.

A second level of security is available for shared volumes. Shared volumes are those available in both read and write mode to more than one user. Access to these shared volumes is controlled by semaphores. These are eight character labels maintained by the system controller.

Any computer can ask to lock a semaphore to limit or control access to the part of the file represented by the semaphore. The request is normally granted if no other computer has already locked it. The label for the semaphore can be any eight character name that is agreed to by the programmers that share access.

Spooling is a sophisticated technique that allows all computers in the network to share peripherals, such as printers. To provide a simple, yet effective means of implementing spooling, the Multiplexer provides data paths or pipes between the computers. A pipe is actually a FIFO (first in first out) buffer that is maintained in an assigned area of the disk and managed by the system controller.

Since the data is stored on the disk, the two computers can proceed in a totally asynchronous manner.

Pipes also permit computers to communicate with each other in a simple serial fashion. The sending computer transmits data into the input end of the pipe and the receiving computer receives the data from the output end. This permits implementation of applications such as electronic mail.

**PRICE:**

**TITLE: D-CAT**

**PUBLISHERS NAME: NOVATION, INC.**

**DESCRIPTION:** Novation proudly announces a worthy compliment to the famous CAT. It's the D-CAT. The first directly coupled modem with the portability, ease of use and low cost of an acoustic. D-CAT is the only direct modem that is FCC approved for handset jack connection with any modular phone. It operates with either single or multi-line telephones without the need of adapters.

D-CAT transmits data over all telephone networks adding a new dimension to business and personal communications. It allows one computer or terminal to talk to another, many miles even

continents apart. The direct connect feature eliminates distortion and lost data problems often associated with acoustic couplers.

D-CAT can communicate with any Bell 100 series compatible modem. The D-CAT can also talk to another D-CAT. Plus, it's fast! Data exchange can occur at any speed up to 30 characters per second.

D-CAT also has all the most wanted features. Not only is it designed to attractively fit under the telephone, but it can be installed in seconds. It has a mode switch to allow you to monitor whether voice or data is being transmitted. The compact power pack plugs directly into wall sockets, reducing heat and voltage hazards in the unit. Also, the handsome low profile case features controls for a special hold function, and complete self-test. Best of all, the D-CAT is from Novation, the recognized world leader in personal communications.

**PRICE:**

**TITLE: DATA CAPTURE 4.0**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** The most user friendly and most flexible program of this type. It is specifically designed to take advantage of all the features of the Micromodem II, but it works equally well with the Apple Communications Card and several other popular serial interface cards.

The only Apple II smart terminal program available which is fully copyable and modifiable. This means that you don't have to worry about backup. Go ahead and make all the backup copies you need. The unprotected format and helpful documentation make modifications to Data Capture 4.0 very easy to perform.

Incoming data files are automatically captured regardless of length. Data in the memory buffer can be viewed, edited, printed, saved to or loaded from disk, or transmitted to the remote system at any time. An unattended mode of operation is provided so that you can call your Apple from another location and send data to it or load data from it.

It is also compatible with all popular lower case adaptors for the Apple II, including the widely used shift key modification. An automatic log-on utility for use with the SOURCE is provided with Data Capture 4.0. Also included is a HELP text file containing the latest tips and suggestions on using Data Capture 4.0 effectively (many of these are the result of feedback from customers). **NOTE:** Specify either Videx, Smarterm, Double Vision, or Sup 'R' Terminal version

**PRICE: \$65.00 Data Capture 4.0**

**\$90.00 Data Capture 4.0/80**

**TITLE: DATA\*TRANS**

**PUBLISHERS NAME: ABT MICROCOMPUTER SOFTWARE**

**HARDWARE REQUIREMENTS:** Hayes' Micromodem II or SSM AIO Serial/Parallel Card with acoustic coupler. 1200 baud rate version requires SSM AIO Serial/Parallel Card and a Vadic type acoustic coupler.

**DESCRIPTION:** This DATA\*TRANS communications software is designed to:

- \* Enable your Apple Computer to hook up with a time-sharing main frame computer or another Apple computer for communication.
- \* Copy main frame data files (download) into your Apple disk files by responding to the prompts. For certain main frame computers with a "stop list" feature (usually control-S), the download of a very long file can be done automatically with the AUTO SAVE feature.
- \* Transfer Apple disk textfiles (upload) to a time-sharing main

frame computer or another Apple computer.

- \* Permit the insertion and deletion of lines from the memory buffer to be saved or transmitted.
- \* Allow printing of the data received or transmitted.
- \* Convert numerical data for input to VISIPILOT, VISITREND, and VISICALC.
- \* Save time and connecting charges with an optional 300/1200 baud rate version.

PRICE: \$60.00 - 40 column version  
\$75.00 - Videoterm-80 version  
\$85.00 - 1200 baud rate version

**TITLE: DATACOMM**

**PUBLISHERS NAME: MIN MICROCOMPUTER SOFTWARE**

**DESCRIPTION:** A data communications software package for use with the Hayes Micromodem II for Pascal-equipped Apple II computers. The package consists of a disk and Pascal owner's manual containing two levels of program commands: the Datacomm Terminal Program for Apple Pascal and the Pascal Micromodem II Routines. The Datacomm Terminal Program allows Pascal users to exchange data and programs with ease and accuracy. The Pascal Micromodem II Routines permit the more advanced Pascal programmer to include data communications commands in their original Pascal programs. DATACOMM software features commands in easy to remember English words, simultaneous printing while connected, 110 or 300 baud transmission and the popular Micromodem II auto dial/auto answer capabilities.

PRICE: \$50.00

**TITLE: DATALINK**

**PUBLISHERS NAME: LINK SYSTEMS**

**DESCRIPTION:** We recently came across this message on the Source network. Seems that quite a few people are discovering what we already know- nothing communicates like DataLink. Just one keystroke sets the environment, dials you in and logs you on- or automatically redials if you need to try again. DataLink works with most any card or modem available for your Apple. You can send any size file you want at 4800 baud computer to computer, or up to 1200 baud over phone lines. See your computer dealer for details.

Words getting around- nothing communicates like DataLink.

PRICE:

**TITLE: DISK LOGBOOK**

**PUBLISHERS NAME: SMART WARE**

**DESCRIPTION:** A software system for logging amateur radio contacts, printing of the log for permanent record, printing of QSL cards for contact verification, QSL status tracking, and award status tracking for multiple awards.

**OPERATE** creates 50 line logbook pages while operating or from previously logged contacts. The program allows for 20 stations to be in QSO simultaneously. Entries for date, time in and out, call sign, frequency, emission mode, RST reports, watts input, QSL status, name, location and general information are provided. Data entry is rapid, and checked for reliability in most cases. The program estimates disk usage, and continues logging onto successive diskettes.

**HARDCOPY** converts the disk-based logbook created by **OPERATE** into printed copy. It is designed for use with printers having a carriage width of 70 or more columns. Pages created by **OPERATE** are accessed by date for printing, and print status is kept for



each logbook page.

QSL converts relevant logbook data into formatted output for QSL cards. Contact verification data is printed on two successive labels or into an equivalent area on plain backed QSL cards. The first label carries the contact exchange information, and the second describes the rig being used during the contact. Ten different rig configurations are kept in a data base with five lines per configuration.

STATUS is used to maintain the logbook, alter QSL status as cards are received, and to correct erroneously logged data. Entries are quickly accessed by date and leading characters of the station call sign.

AWARD maintains call sign, date and time worked, QSL status, award relevance, and claimed credit status for multiple award files. This program can be used to track DXCC, WAS, WAZ, and other awards. Printer reporting is provided.

Disk LogBook is intended for use with 32K or 48K Apple II systems with ROM Applesoft, or 64K systems with RAM Applesoft. One disk is essential, but two is optimum. A tractor feed printer is required to prepare labels for Qsl cards, but a plated feed printer can be used with plain back QSL cards.

**PRICE: \$29.95**

**TITLE: EASYMOVER**

**PUBLISHERS NAME: INFORMATION UNLIMITED SOFTWARE**

**HARDWARE REQUIREMENTS:** Either a D.C. Hayes Micromodem or an acoustical modem and an Apple Communication Card

**DESCRIPTION:** EasyMover will transform your FasyWriter word processing system into an electronic mail system. Need a report sent thousands of miles away? EasyMover will do it in minutes, not days or even hours. The EasyWriter files between two Apple computers over normal telephone lines. It also translates back and forth between EasyWriter and Apple text files. This makes EasyWriter compatible with VisiCalc Databex, and other Apple files.

**PRICE: \$99.95**

**TITLE: FIRST EDITION**

**PUBLISHERS NAME: COMMUNITREE GROUP**

**DESCRIPTION:** A computer conferencing software package with general data base and "electronic mail" features. Designed to run on an Apple II or II+ with 48K of memory, one or more disk drives, and a Hayes Microcomputer Products MicroModem II (modem not required for local data base use), the system allows users to enter messages and to retrieve them via regular phone lines using a computer or terminal and a standard 30 cps or 10 cps modem. Each new message is attached to any other already in the data base, allowing users to organize a "conference tree" of messages -- any one of which can "grow" into a new conference or subconference. This "tree" structure makes it easier to find specific information, and to enter information in the most appropriate part of the data base. Maximum message length is 50 lines or 80 characters, with up to 320 different messages, depending on available disk space.

Messages entered can be either public -- readable by everyone using the system -- or private, and both kinds can share the same system. This means that confidential or preliminary conferences can take place prior to publication in the "public" sections, if so desired.

Seven different levels of password protection take the system from "completely open/public" to "completely closed/private." (The latter might be used for a personal or professional



messaging system/network, for example.) Passwords are easy to change.

Applications include on-line publishing; an "electronic bulletin board" (BBS); and others too numerous to list here.

Designed with low cost and ease of use in mind, this software is comfortable for users and easy for the "system operator" to maintain.

A backup utility for making copies of the program and data disks is included in the package.

The source code is written in FORTH and will be available separately.

In addition to technical and start-up data, the manual contains an introduction to microcomputers with an emphasis on telecommunications software, data base directories, and various telephone services now available to microcomputer owners. The manual alone serves as an excellent introduction to computing for non-technical people. An extensive bibliography, glossary and index are included.

**PRICE: \$95.00 complete conference tree system**  
**\$80.00 the program**  
**\$20.00 the manual**

**TITLE: FLEXITERM**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** An intelligent terminal package offering many features in addition to data capture and data send. Includes a full text editor and supports five interface cards in addition to the Hayes Micromodem (use of the supported serial cards assumes the user has a modem of some type already set for the RS-232 standard). For those using the Apple communications card, you now have intelligent terminal capabilities. Flexitem has an easy to use, menu-driven terminal program which allows for data capturing and data sending, both with auto-redial for those using it with the Hayes Micromodem. For those with a 16K card in their system configuration, a SWAP feature may be used to go from terminal function to editing text with one keystroke (no need to keep accessing the desk). Supports 80 columns with a Videx board and lower case using any of the popular lower case adaptors in 40 column display. the package will allow a user to send and receive data at rates of 110, 300, or 1200 baud. (Note however, that the Apple-Cat II from Novation is not supported). A print option is included on the menu to allow for hard copy of the captured buffer or edited text. The user saves time and effort by having both communications capability and text editing built in to the same package.

May be configured for any of the cards listed below:

- A) Test with no card
- B) Apple Communications Card
- C) Electronic Systems Card
- D) Hayes Micromodem II
- E) SSM AIO Interface Card
- F) Apple Serial Interface Card
- G) CCS Async Serial Interface Card

Large capture buffer has provision for stopping input, writing to disk if desired, and continue from point buffer was filled.

**PRICE: \$74.95**

**TITLE: HANDICAPPED TYPEWRITER**

**PUBLISHERS NAME: ROCKY MOUNTAIN SOFTWARE**

**HARDWARE REQUIREMENTS:** Printer, Micromodem II, Introl/X-10 controller system, BRS Modules and a Companion Handsfree phone

**DESCRIPTION:** Software designed for the severely disabled that are

unable to use a keyboard. The Apple together with a Silentyper printer becomes a dedicated typewriter controlled by a simple switch. A picture of a keyboard is displayed on the TV screen and characters are selected by the control of scanning cursor. Version 2.0 includes a user definable word and phrase dictionary and a calculator.

Version 3.0 has in addition a telephone directory, dialing and answering service using a loudspeaker phone and environmental controller.

**PRICE:** \$ 99.00 Version 2.0

\$199.00 Version 3.0

**TITLE: HIGH SPEED TERMINAL PROGRAM**

**PUBLISHERS NAME: BIT 3 COMPUTER CORP.**

**HARDWARE REQUIREMENTS:** The Bit 3, Full-View 80, 80x24 card and the Bit's 3 Dual-Comm Plus serial communications card.

**DESCRIPTION:** Convert your Apple II into a high speed 80x24 computer terminal. Your Apple II computer terminal can operate asynchronously at speeds up to 4800 baud. Features include a 256 character FIFO buffer and support of upper and lower case from the keyboard. Printing of displayed data is supported (the printer must keep up with the comm line speed). Operating modes such as full/half duplex, parity selection, and the number of data bits per character are user selectable. the manual includes the program source code for easy user customization.

**PRICE:** \$39.00

**TITLE: INTELLIGENT KEYPUNCH**

**PUBLISHERS NAME: SERENDIPITY SYSTEMS, INC.**

**DESCRIPTION:** Intelligent Keypunch is a sophisticated product designed for the distributed computing market. Data entry may be performed off-line at anytime by an untrained operator, and may be stored for later transmission to a remote computer. Data may also be received from a remote computer and stored for later file manipulations. Initial preparatory activities may require assistance from a data processing professional.

**PRICE:**

**TITLE: MICRO-COMMUNICATOR**

**PUBLISHERS NAME: GROVER & ASSOCIATES**

**DESCRIPTION:** A new set of programs which transforms the APPLE II or APPLE II PLUS into a communications device for the disabled. No expensive peripherals; requires computer, single disc drive and TV. A single keystroke by mouthstick will cause an entire sentence to be displayed on TV - and longer messages are constructed similarly from a built-in vocabulary exceeding 1,600 words. Messages can be printed out as mail. All sentences are user-changeable, as is a 50-word personal vocabulary. See review in The Journal of Courseware Review Apple Foundation Publication.

**PRICE:** \$45.00 VERSION A - Adult Vocabulary

\$45.00 VERSION C - Child's Vocabulary

Disk/documentation. Include \$3.00 shipping and handling

**TITLE: MICRO-COURIER**

**PUBLISHERS NAME: MICROCOM, INC.**

**HARDWARE REQUIREMENTS:** DC Hayes Micromodem II, clock card and additional drives are optional

**DESCRIPTION:** Enables instant electronic mail transmission to Apple microcomputers. Will allow you to transmit charts, graphs, correspondence, VisiCalc reports, and entire programs to other

Apple computer owners over standard phone lines. These transmissions can be sent day or night, to take advantage of the late night phone rates. Menu-driven features include: an editor with the capability to create, edit, and revise messages; a send/receive mode which automatically dials a message recipient (re-dialing at preset intervals until answered), accepts and stores incoming mail on disk; maintains 26 distribution lists; it has the ability to selectively display, print, or file messages; (and the use of predefined text formats for creating messages).

**PRICE: \$250.00**

**TITLE: MICRO-TELEGRAM**

**PUBLISHERS NAME: MICROCOM, INC.**

**HARDWARE REQUIREMENTS: DC Hayes Micromodem II. A clock card and additional drives are optional.**

**DESCRIPTION:** Lets your Apple II computer access all Western Union services worldwide. You can send mailgrams, send and receive TWX/Telex messages and utilize all Infomaster reports (i.e., stock market, foreign exchange, gold futures, news, etc.). Micro-Telegram is an automated TWX replacement.

Menu-driven features include: an editor with the capability to create, edit, and revise messages; a send/receive mode which automatically dials a message recipient (redialing at preset intervals until answered), accepts and stores incoming mail on disk; maintains a data base of 100 names and telephone numbers; maintains 26 distribution lists; it has the ability to selectively display, print, or file messages; (and the use of predefined text formats for creating messages).

**PRICE: \$250.00**

**TITLE: MICROMODEM II**

**PUBLISHERS NAME: HAYES MICROCOMPUTER PRODUCTS, INC.**

**DESCRIPTION:** The Micromodem II is a complete data communications system for Apple II computer. The Micromodem II can greatly expand the capabilities of your Apple II computer by providing data communications for business, home or school.

The Micromodem II system consists of three parts. The first part, the printed circuit board, holds the modem, ROM firmware and the serial interface. The board plugs directly into the Apple II eliminating the need for a serial interface card. The on-board ROM firmware enables the Micromodem II to operate in three modes to perform different tasks- terminal mode, remote console mode and program control mode. In terminal mode, the Apple II can be used to call and communicate with any other small computer or large time sharing system, like THE SOURCE, that is equipped with a compatible modem. In remote console mode, the Apple II can be accessed like a time-sharing computer, one user at a time.

The second part of the Micromodem II system is the Microcoupler, an FCC approved device, which connects the Apple II directly to the telephone line and eliminates the losses and distortions associated with acoustic couplers. The Microcoupler waits for a dial tone, dials numbers, answers the phone and hangs up when a transmission is over. The Microcoupler is compatible with all US standard telephone lines and works with standard dial phone service.

The Micromodem II system also includes the Micromodem II diskette containing 12 programs with varied applications.

The Micromodem II is completely compatible with Bell 103 type modems. Full and half duplex operating modes are available as well as user selectable transmission rates of 110 or 300 bps.

Programming the Micromodem II



The Micromodem II firmware allows you to auto dial , auto answer and hang up the telephone. Using simple BASIC programs, you can also transmit and receive data via the Micromodem II. The number of BASIC programs you can write for the Micromodem II is limited only by your imagination.

For those who program using the Pascal language, the optional Hayes DATACOMM software package allows the Micromodem II to be used with Pascal equipped Apple II computers. The DATACOMM package consists of a diskette and Pascal Owner's Manual. DATACOMM software features commands in easy to remember English words, simultaneous printing while connected, 110 or 300 baud transmission and Micromodem II auto dial/auto answer capabilities.

**PRICE:**

**TITLE: MICROMODEM II DISK**

**PUBLISHERS NAME: FIRST SOFTWARE, INC.**

**DESCRIPTION:** A communications system, not a single transmission program Consists of 22 inter-related Applesoft computer programs which can do far more than a single communications program can. The system has been designed for regular users of the Hayes Micromodem II, especially businesses. The programs are very user-friendly and self-prompting. A written teaching TUTORIAL for beginners comes with the DISK which explains step-by-step how to use the entire system.

Using the system, one person from one computer can control everything by himself without any assistance from another person at a remote computer. Absolutely anything that can be put on a disk can be transmitted either to or from a remote computer.

This system of programs is written entirely in Applesoft, not machine language. This means you can list all of the programs to understand them or modify them to suit your special needs if you wish.

**PROGRAMS WILL:**

- \* Dial phone numbers automatically or answer the phone automatically and give you customized greeting to any caller.

- \* Allow you to operate and control a remote computer over phone lines from the keyboard of your computer.

- \* Transmit anything to or from a remote computer that can be put on a disk under DOS 3.3 (including random-access text files)

- \* Transmit an entire disk full of data non-stop because the programs do not rely on the Apple's limited memory capacity.

- \* Make printouts on paper at a remote computer or your own computer.

- \* Log in on a big mainframe computer and communicate with it.

- \* Make totally automatic transmissions without humans at either the sending or the receiving computers. (Use this feature to get the cheapest long-distance phone rates in the middle of the night, to send reports after business hours, or to keep the computer free at times when humans need to use it).

**PRICE:**

**TITLE: MODEM MAGIC 2.0**

**PUBLISHERS NAME: ROCKY MOUNTAIN SOFTWARE**

**HARDWARE REQUIREMENTS: Micromodem II or Commcard**

**DESCRIPTION:** A must for any computer bulletin board system user. Allows easy up- and downloading of text to and from remote computers. The text may be prepared using the built in line editor. Other facilities allow for the transfer of Integer, Applesoft or Basic programs. This software will pay for itself in a short while with the savings from long distance toll charges.

**PRICE: \$70.00**



**TITLE: NET-WORKS****PUBLISHERS NAME: COMPUTER STATIONS, INC.****DESCRIPTION:** A bulletin board and computerized message management system using the Hayes Micromodem.

Allow for speedy log-on, electronic mail with security provision, downloading programs and editing features that enable the modem to keep up with typing and for the user to delete words or lines in the event of an input error.

May be used in conjunction with Auto-Modem for establishing a business communication network, home to office message center or for general bulletin board service.

Allows the system operator to have control over who uses the system. It supports Thunderware and Mt. Hardware clocks and has provisions for a user-defined clock.

In addition, Net-Works comes with utilities for keeping the user's system up-to date and a general purpose text file editor which can be used to edit old files or create new ones for use with any program that uses Apple's standard text files.

**PRICE:****TITLE: OMNINET LOCAL NETWORK****PUBLISHERS NAME: CORVUS SYSTEMS****DESCRIPTION:** The Omnet local network supports up to 64 devices sharing a simple RS-422 twisted pair of wires up to 4000 feet in length. It transfers data at the rate of 1 million bits per second.**Transporter Interfaces**

Each device attached to the Omnet local network has an interface controller called a transporter. The transporter utilizes a Motorola 6801 microprocessor, a custom gate array integrated circuit to control high speed direct memory access (DMA) data transfers, and associated support components.

The transporter interfaces directly to both the RS-422 serial line and host computer's memory. Transfer of data to or from the host computer is performed without intervention by host software. Because the data transfer is handled by the transporter and data buffering is not required, high speed data transfers are possible while maintaining a low cost network interface.

**Distributed Control and Shared Access**

The Omnet local network is a distributed control network and hence, no master controller is required. Network control is assumed by any transporter which has a message to send as soon as the network is available.

Since Omnet is a shared access local network that allows any device to transmit at any time, a collision avoidance scheme is implemented in the transporters. Collision avoidance is performed using a combination of two methods. First, the popular Carrier Sense Multiple Access (CSMA) mechanism is utilized to determine when the network is available and second, the transporter computes a randomized transmit start time to minimize the probability of two devices trying to access an available network at the same time.

Omnet does not require a collision detection mechanism. This allows Omnet to be implemented on an RS-422 twisted pair of wires and eliminates the cost associated with collision detection hardware.

**Automatic Error Detection and Correction**

Error detection, and retransmission activities are performed by the transporters without software intervention. Thus, the host software burden is substantially reduced while overall system performance is improved. Omnet utilizes a positive

acknowledgment method to insure that a message has reached its destination without error. If a positive acknowledgment is not received by the transporter until it is successful, or a user specified number of retries have been performed. If transmission is unsuccessful, the sending host is informed as to the nature of the error.

#### Flexible Device Addressing

Device addressing within the Omninet local network allows a message to be sent to any device attached to the network or a message broadcast to all devices on the network. In addition to device addressing, Omninet supports sockets. A socket provides additional addressing capability by allowing a message to be sent to a particular buffer in the selected host microcomputer. Four sockets can be defined for each device to aid in the separation of different types of messages within the host computer.

#### Easy to Use Message Commands

The transporter accepts two major categories of commands from the host computer to control the overall flow of messages within the local network. The two major categories are:

- Send Message

- Receive Message

The send message command transmits a message up to 600 bytes in length to any designated host socket. The send message command includes a command code, a result address, a destination host socket number, the message address and length, and an optional message header up to 255 bytes in length. The transporter utilizes DMA to transfer the message and optional message header without additional host software involvement. When the message is delivered, the result status code is set to reflect the status of the transmitted message. Some of the possible results are:

- message delivered successfully

- message failed after "n" tries

- receiving socket not set up

- message too long for receiving socket

Receive message commands prepare host sockets to receive incoming messages. The receive message command includes a command code, a result address, a socket number, a data buffer address and maximum message length. The optional message header length is also specified.

When the optional message header is utilized, the header and the actual message can be placed into different locations within the host's memory. This feature allows device drivers to place the message data directly into the user's buffer while placing the header information in the driver's buffer, thus eliminating the need for the driver to move the message data to the user's buffer.

#### Network Protocols- Constellation Software Available Now

Various types of network protocols can be implemented using the Omninet local network. Corvus Systems has implemented its field proven Constellation software protocol on the Omninet local network. The Constellation software allows multiple computers to share a Corvus disk system. A special disk server device is utilized with the Constellation software when the Omninet local network is used. The disk server appears as just another device on the local network to the Omninet network but performs disk sharing for the other computers on the network. The disk server contains both a transporter network interface and a Corvus disk system interface. Additional shared peripherals will be added to the Omninet local network in a similar manner.

#### Specifications:

Data Rate: 1 million bits per second

Total Network Length: 4,000 feet (1.21 km)

Number of Devices: Up to 64

Message Size: Variable, up to 2 kilobytes

Network Medium: RS-422 twisted pair wire  
**PRICE:**

**TITLE: ONLINE**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** Have you ever wanted to be able to call your computer while you're away from home? Or, let your computer take messages for you or your friends in the form of a completely private message system? And all of this with complete security against unauthorized access by users you don't know, or don't want using your equipment/

ONLINE, an extraordinary new software package from Southwestern Data Systems can do all that plus much more.

Up to 50 users accounts which require an account number and a password for log-in may be set up by the system operator. A guest account may also be set up if desired. Its purpose would be to allow new or first time users a way to log-in to the system before a standard account has been assigned. Each accounts can be assigned different priority levels which ultimately determine which features or areas of the system may be accessed by that account. A complete caller logfile is maintained so you can quickly see who has called and when.

Supports very efficient mail handling between user accounts. Mail can be read only by the account holder to which it is sent and also supports auto-reply, read again, and delete modes. The messages can be up to 60 lines of 78 characters per line in the standard mail mode, or up to 800 lines in any form if composed via the versatile system editor.

The system editor supports extended mail facilities in addition to a universal text buffer which is utilized during text uploading, downloading, and many extended editing functions for both mail and general text.

You can also keep the system entirely private and to yourself for your own personal access. As the system owner you are free to exit from the program itself while on-line, and access the computer directly or run other programs, all while under direct supervision of a very special supervisory input/output routine, which along with providing crashproof character input and output, also protects the system against loss of carrier, if loss of carrier occurs, the system will completely re-boot and return to an on-line state waiting for the next caller.

**PRICE: \$88.95**

**TITLE: OPERATOR**

**PUBLISHERS NAME: TNW**

**DESCRIPTION:** Operator is a simple, inexpensive device that lets your computer dial and answer calls for you- automatically. With TNW's OPERATOR and your acoustic coupler or direct connect modem, your computer terminal communicates by phone with other computers around the world.

Now you'll be able to exchange data and programs, call up bulletin board information and access data bases- at home or from other locations- 24 hours a day!

Simply plug Operator in, load your software and leave. Operator does the rest, including late night calls when phone and time sharing rates are lowest.

Because Operator is designed for use with acoustic couplers or direct connect modems, its price is reasonable. Commands and operating modes are easy to learn and the unit itself is easily installed. Operator is simply a special device for special use.

**FEATURES INCLUDE:**

Automatic Pulse Dial

Automatic Answer



Powerful Command Interpreter  
RS-232 Interface to Computer  
Full and Half Duplex

Loopback Self-Test  
Operation to 300 Baud  
Full One Year Warranty

#### System Configuration

Operator provides two telephone jacks, one connected to your telephone line (must be modular plug) and the other to your telephone instrument or direct-connect modem. Operator's two EIA (RS-232C) connectors are cabled to your acoustical coupler (or direct connect modem) and to your computer terminal. This allows Operator to receive commands from your computer or terminal, and to control your telephone line.

A number of operating parameters must be established in order to configure Operator for a specific systems application. Parameters are initialized according to switch settings, but the user can issue commands to change most of them. These parameters include:

Baud rate: 110, 150, 200, or 300 bits per second (crystal controlled)

Auto Answer: Enabled or Disabled

Local Echo: Enabled (Half Duplex) or Disabled (Full Duplex)

Fast Dial: Enabled (20 pulses per second) or Disabled (10 pulses per second)

Carrier Monitor: Enabled (for modems that use EIA pin 8 to indicate carrier signal present) or Disabled

Command Interpreter: Enabled or Disabled (for transparent use)

Command Prompting Output: Enabled or Disabled (for transparent use)

Disabling the Command Interpreter prompts is desirable in cases when the presence of OPERATOR must be transparent to the computer to which it is interfaced.

#### System Operation

At any moment, Operator is in one of two operating modes. In Terminal mode, characters that Operator receives from your computer or terminal are passed to your modem unchanged. In Command mode, input is processed by Operator's telephone connection. You issue a command by merely typing the first letter of the command name.

Commands include:

Answer

Dial

<Return> (to return to terminal mode)

On-Hook (to hang up the phone)

Baud (to change baud rate)

Hdplx (to enable or disable local echo)

Fdial (to enable or disable fast dialing)

InTeRcEpT (to change the intercept character that returns you to command mode)

Status (to display operating parameters)

When there is no active connection (i.e., CARRIER FALSE), Operator remains in Command mode. Terminal mode is entered automatically when modem carrier is detected after a call is dialed or after Operator answers an incoming call. You can return to Command mode without dropping the connection by entering either the character string "InTeRcEpT" or a preselected intercept character (initialized to "@", resettable by the InTeRcEpT command). You can transmit the intercept character to the remote system by entering it twice. Operator automatically hangs up the phone for you if it is left in Command mode for more than two minutes without a command being entered.

PRICE: \$129.00

TITLE: P.I.T.S.



**PUBLISHERS NAME: SOFTWARE SORCERY, INC.**

**DESCRIPTION:** P.I.T.S. makes your Apple II running Apple/UCSD Pascal into a super terminal. Connect your Apple to almost any computer system and copy what you see - up to 24K at a time - and save it on disk or print it. Text files may be sent from your Apple disk to the other system, either a line or a character at a time. Use any Pascal compatible 80 column display board or the standard 40 column Apple screen. P.I.T.S. is compatible with the Hayes Micromodem II (TM) or an acoustic modem and one of the following interface boards: Apple's Communications Card, the AIO (TM) from SSM Microcomputer Products, and California Computer Systems' 7710A.

**PRICE: \$44.95**

**TITLE: PASCAL UTILITY MICROMODEM PACKAGE (PUMP)****PUBLISHERS NAME: MICRO SOFTWARE SYSTEMS**

**DESCRIPTION:** The Pascal Utility Micromodem Package is a set of intrinsic functions designed to facilitate the use of the D.C. Hayes Micromodem II with Apple/UCSD pascal.

Functions are:

FUNCTION	TYPE	DESCRIPTION
RING	BOOLEAN	Returns a TRUE value if the phone is ringing
CARRIER	BOOLEAN	Returns a TRUE if carrier is present
CARON	BOOLEAN	Sets originate/answer and baud rate
CONNECT	N/A	Connects a phone, does not turn on carrier
DIAL	STRING	Dials phone number contained in a string
DIAL	CHAR	Dials a single digit
DISCON	N/A	Hangs up the phone and turns off carrier
WRDLNGTH	INTEGER	Sets the word length and parity for transmit
MDMSND	CHAR	Sends a single character
GETMDM	CHAR	Gets a single character from the modem
STAT	INTEGER	Gets contents of ACIA status register
INITMDM	N/A	Initializes the ACIA and modem
DELAY	INTEGER	Delays specified amount of milliseconds

All the above functions and procedures have been placed into a intrinsic unit and the unit has been placed in the SYSTEM LIBRARY on the diskette we supply. This eliminates the need for a separate linking step for most programs using the PUMP routines. We have also modified the Apple/UCSD Pascal BIOS (Basic I/O Subsystem) on the diskette so as to properly operate the Micromodem, yet still retain full compatability with all Apple peripherals.

We also include a routine for those users that have Dan Paymar's Lower Case Adapter, that modifies BIOS to allow the display of lower case characters.

The documentation supplied includes source listings of all the functions and several example programs to illustrate the use of the PUMP routines.

**PRICE: \$24.95**

**TITLE: PHONE SECRETARY****PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION****HARDWARE REQUIREMENTS: A micromodem (for voice calls only)**

**DESCRIPTION:** Give it a name, let it find and dial either the home or office number, time the call, and keep a log to compare with your phone bill! Holds over 1000 names, 2 #s each. Prints alphabetical, up-to-date phonebook whenever you want. Works well with most clocks or can time calls in software.

**PRICE: \$25.00**

**TITLE: PICTURE TRANSFER PROGRAM****PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Watch Hi-Res graphics pictures as they are sent from one Apple to another - About 1 minute set up then sends picture in 4.5 min. - automatically saves to disk.

**PRICE: \$35.00****TITLE: SIGNALMAN MARK I MODEM****PUBLISHERS NAME: LEADING EDGE PRODUCTS, INC.**

**DESCRIPTION:** SIGNALMAN MARK I MODEM, Anchor Automation's new Bell 103-compatible modem provides a whole series of features found nowhere else -- all designed to generate maximum performance with a minimum of fuss.

Anchor has virtually "reinvented" the modem for today's breed of personal computer user, packing state-of-the-art technology into the smallest, most versatile modem on the market.

**PRICE: \$99.00****TITLE: SMARTMODEM****PUBLISHERS NAME: HAYES MICROCOMPUTER PRODUCTS, INC.**

**DESCRIPTION:** The Hayes Stack Smartmodem is a high performance data communications system for small computers. It is the most sophisticated, yet simple to use, 300 baud originate/answer modem you can buy. With the Smartmodem, your RS-232C compatible computer or terminal can communicate via telephone with other computers or time-sharing systems anywhere in North America.

The Smartmodem is a stand alone system including the Smartmodem unit, power pack and modular telephone cable. A complete owner's manual is also provided with the system. The Smartmodem can be used to automatically call and communicate with time sharing systems and other computers or to automatically answer incoming calls from distant systems. All the circuitry necessary for the auto-dial and auto-answer features is built into the unit, eliminating the need for auxiliary equipment.

The Smartmodem is completely programmable and can be controlled using any programming language- a unique feature. Over 30 different commands can be entered directly from the keyboard including special "Set" command. The "Set" commands allow the user to select or change various operational parameters such as dialing speed, escape code character and length of wait for a dial tone. The system analyzes and executes commands and, in response, sends result codes which may be English words or decimal digits depending on the user's application.

Hayes Stack Smartmodem is approved by the FCC for direct connection to the telephone line. Since it is a direct-connect device, it has none of the losses and distortions associated with acoustic couplers. Unlike most modems, the Smartmodem can be connected to any telephone system in the United States since dialing can be Touch Tone, pulse or a combination of the two. For example, both dialing modes could be combined within a command using pulse dialing to access a PBX (private switchboard) and Touch Tone for dialing an outside number after the second dial tone is received.

With the Smartmodem's audio monitor you can actually listen to the connection being made. Without picking up a telephone, you'll immediately know if the line is busy, if you reach a wrong number, or if the computer you are trying to call is off line and a person answers the telephone. If the line is busy, enter a repeat command and the Smartmodem will automatically re-dial the number for you. For quiet operation, the volume control knob

allow you to turn the audio speaker down or off.

The Smartmodem is completely compatible with popular Bell 103 type modems in originate or answer mode. Operation can be a full or half duplex with a transmission speed of 0-300 baud. Power on default settings are controlled by the positioning of seven option switches located behind the Smartmodem front panel. Four of these options can be overridden by software commands that are user entered or issued under program control. Seven LED indicators on the front panel of the unit provide a visual check of the operational status of the Smartmodem. The LED's indicate auto answer, carrier detect, off hook, receive data, send data, terminal ready and modem ready.

The Smartmodem can be used in three operational modes. It can be connected to an RS-232C compatible terminal, computer or receive only device such as a printer. In these configurations the Smartmodem can connect and communicate over telephone lines with any other microcomputer or minicomputer equipped with a Bell 103 compatible modem. The Smartmodem can also access most of the Bulletin Board Systems (BBS's) available as well as many large time sharing systems and information services e.g., The Source, CompuServe and MicroNet.

With its customized operation and unique programming features, the Smartmodem provides a wide variety of applications. The Hayes Stack Smartmodem represents the state of the art in data communications systems for small computers. It is everything you will ever want in a 300 baud modem.

**PRICE:**

#### **TITLE: SNOWATCH**

#### **PUBLISHERS NAME: MEDIA SERVICE CONCEPTS**

**DESCRIPTION:** A Microcomputer Software Package for Radio and TV Stations. Assign schools, factories, and businesses a unique identification code number. Then on the morning of the BIG SNOW STORM they phone-in their number...and SNOWATCH takes over. You'll have all the closings and openings ready to go - completely organized the way you want them.

You define the organization of listings. For example...choose counties, cities or states. A secondary level is also possible. With this feature your final listings could be numerically ordered districts, county-by-county. Or they could be city-by-city within a state.

Print school and business closings by individual major groups, or any combination of groups. The system is flexible enough to meet your needs.

Standard or special messages can be attached to any listings. Lets you announce that buses are running late for an open school, or that a scheduled event has been cancelled. Messages can be updated or changed as additional information is received.

Screen Status Reports show the percentage of schools that are open or closed within each major organizational level. Helps you determine which condition - open or closed schools - is most appropriate to announce.

Special "Update" feature lets you print a report of very recent closings that have arrived since the last full report was made. You can choose an "Update" or "Full" report at any time.

Another special feature allows a higher level command to direct lower level closings. One call from a District office can close all the schools in that district.

#### **ADDITIONAL FEATURES:**

Prepare your master Address List by entering names, addresses, contacts, and telephone numbers. You can print out a permanent record, plus a numerical order "short form" for use in code number verification.



Automatically prints two labels for mass mailings. An outside address label, plus a code label to be affixed on your inside cover letter.

Full recovery in case of power loss or operator error. All new information is immediately saved on a disk. In case of trouble, simply re-start the system and pick up where you left it.

The program is menu driven and user-friendly. Commands and instructions are written in plain English, and choices are made by typing a number or letter. Easy to install and operate.

Handles many different types of closing announcements. In addition to schools and businesses, you might want to organize lists of private schools, day-care centers, or factories.

An important "Wildcard" feature lets you keep track of announcements from organizations to which no code was assigned. Wildcard messages can be assigned within your existing organizational patterns.

**PRICE: \$350.00**

**TITLE: TELEPHONE TRANSFER PROGRAM**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Transfers Applesoft, Integer or Binary files from one Apple to another. After about one minute, set up then sends 1800bytes/min (using tokens)-streamlinedoperation- automatically saves - only sending side needs copy of program - can be operated remotely.

**PRICE: \$45.00**

**TITLE: TERMINAL PROGRAM**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**HARDWARE REQUIREMENTS: Micromodem**

**DESCRIPTION:** Memorizes and repeats your log on to most systems! 16K capture buffer can be reviewed/printed while on/offline. Upload text easily. Supports upper and lower case, keyboard Macros, untypeable characters with or without an adaptor. Formats display for 40 column screen.

**PRICE: \$35.00**

**TITLE: THE CONTEXT CONNECTOR**

**PUBLISHERS NAME: CONTEXT MANAGEMENT SYSTEMS, INC.**

**DESCRIPTION:** A unique all-purpose communications program which automatically converts data files into VisiCalc format. You can load data files from any mainframe computer and transfer them into the VisiCalc cells you select.

Lets tap into services like Dow Jones and easily convert stock, bond and commodity prices into VisiCalc. Or you can download files from you company computer so that you can compare the results you projected using VisiCalc to the actual results reported in the main computer.

Also lets you convert data from data base programs like Datadex into VisiCalc format. The Connector will convert data from any standard Apple DOS text file into VisiCalc format.

Offers key communications features, including sending and receiving data files, saving data from timesharing services like the Source, Dow Jones or your company computer. Also stores and dials numbers automatically.

Can be used to send and receive electronic mail on all major mail systems.

The connector's file print commands allow you to dump any text file to your printer, so you can review data before you convert it into a VisiCalc model.

Allows you to set a standard format to convert data which you



receive on a regular basis. If you access your company computer each week for sales results, using the custom routine, you can save the instructions. Once you've told the Connector how you want the information placed in VisiCalc, you can use that format in all future communications.

**PRICE:**

**TITLE: THE N.E.X.U.S**

**PUBLISHERS NAME: SIR-TECH SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: 2 disk drives, Language card, D.C. Hayes Micromodem, Mountain Hardware Clock. Optional - additional disk drives can be added to the system**

**DESCRIPTION:** A sophisticated electronic mail system for the Apple computer. Rather than use the Apple of the caller as dumb terminal, N.E.X.U.S shares intelligence between the caller's machine and a highly sophisticated HOST system.

This symbolic relationship provides many benefits that simple "bulletin board" systems cannot provide, not the least of which is an increase in the data transmission rate of over 100%. This means that an Apple, communicating at 300 baud, effectively runs as if it were communicating at 600 baud.

It provides messages, grouped discussion files, file downloading, graphics and much more. A special bootstop system allows the user without the N.E.X.U.S U.S.I (User Communications Interface program) to download the U.C.I software so that communication with a N.E.X.U.S host is possible.

**PRICE:**

**TITLE: TRANSEND DATA COMMUNICATIONS SOFTWARE**

**PUBLISHERS NAME: SSM MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** TRANSEND 1 - permits Apple to Apple communications, as well as Apple to mainframe or "information utilities" (such as "The Source"), and allows the user to send and receive messages, data files, etc., using a modem and a phone line.

TRANSEND 2 - performs the same functions as the Transend 1, but has a larger file handling capacity, and can detect errors in transmission. If an error is detected, Transend 2 will automatically retransmit the data for verification.

TRANSEND 3 - combines all these features, but adds electronic mail capabilities, making the Apple a total communications machine.

The Transend series is compatible with the widest range of add-on boards, as well as the most popular modems. And with the ability to utilize a 1200 baud rate, Transend is one of the fastest data communications software packages available.

The Transend series is one of the first software products that can be upgraded without going through large additional software purchases. The user can purchase Transend 1 or 2, and at a future date can upgrade, at special trade-in costs, to any level his system requires.

Minimum Apple II system configuration for using Trans

\*Apple II with 48K RAM and Applesoft or Apple II plus with 48K RAM

\* Disk II with controller and DOS 3.3

\* Display Device

\* Serial Interface and modem

We also recommend the following items to fully utilize the features and capabilities of Trans

\* An additional Disk II

\* A serial or parallel printer and compatible interface card

\* A 16K RAM card

**PRICE:**

**TITLE: VISITERM****PUBLISHERS NAME: VISICORP****HARDWARE REQUIREMENTS:** one of the following: Apple Communications Interface, Hayes Micromodem II or California Computer systems Model 7710 Asynchronous Serial Interface. You may also require a modem.**DESCRIPTION:** It makes it easy to communicate with other computers.

The VisiTerm program enables you and your Apple II to communicate with larger computers and other personal computers.

You can transfer disk file information over the phone, and tap into timesharing services, newswires, stock reports and other information data bases for instant information on nearly anything. No programming is required.

You have all the security and convenience of a personal computer, plus the benefits of an on-line terminal.

You can access your company's central computer or other computing service from your desk for greater computational power and special programs.

You can "download" information from large host computers to your personal computer, placing the data on diskette for printout.

You can send and receive information between your personal computer and other personal computers, including VisiCalc worksheets and other Visi program files, ASCII text files, or binary or BASIC files.

With the VisiTerm program it's easy to adjust your terminal configuration to match host computer requirements such as baud rate, stop bit, parity and many others. You can define your own character set, and the ASCII code to which it responds. Full upper and lower case and APL characters are included. Special macros save you time in performing often-repeated sequences.

Ask your retail computer store salesperson for a demonstration of how easy it is to add communications with the VisiTerm program.

**VISITERM FEATURES:**

- \*You can transfer DIF files, Applesoft or Integer BASIC listings, VisiCalc or VisiTrend/Plot text files or any other ASCII text files as well as binary files over a standard phone line.
- \* VisiTerm lets you configure your computer to emulate almost any dumb terminal, including: Baud rate (110-1200 baud), Parity bit, Stop or double stop bit.
- \* "Keyboard macros" permit you to redefine any key on the keyboard. This allows you to send frequently-used sequences of characters with a single keystroke.
- \*You can define a macro to log onto a host computer for you - automatically entering your account number and password.
- \*You can define and save your own character set and controls which ASCII code each character responds to. The VisiTerm program comes with full upper and lower case letters and a set of APL characters.

**PRICE: \$100.00****TITLE: VT100 EMULATOR****PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Turn your Apple into a remote timesharing terminal! The VT100 Emulator program allows you to use your Apple II or II Plus computer as a conversational terminal (with 40-character/line, uppercase-only display) on RSTS/E based, PDP-11 (TM) systems. With this program and an Apple Communications Interface Card, your Apple computer can communicate at 110 or 300 baud with large timesharing systems, either directly or via

telephone link (through an acoustic coupler). You save money on hardware, because your Apple computer performs many of the functions of Digital Equipment Corporation's expensive VT100 terminals. And since your Apple is a powerful microcomputer, you can develop programs on it locally and reduce on-line charges. That's the kind of cost-effectiveness you just can't get with an ordinary terminal.

The VT100 Emulator also: automatically configures your Apple computer as a recognizable terminal to the PDP-11 system...so you save time; allows you to transfer files easily between your Apple computer and the timesharing system...so you work more efficiently; lets you use your Apple with systems having modified RSTS/E prompt sequences...so you get greater system flexibility. To log on to any RSTS/E system, you must already have an account number and password for that system. The VT100 Emulator then simplifies connection procedures. A few keystrokes and a telephone call are all that's usually required. The VT100 Emulator's helpful menu makes the program easy to use. Select Auto Set Up (option A), for instance, to configure your Apple system as a "recognizable" terminal to the host PDP-11. A series of commands automatically handles the task. Or select File Transfer (option F), to transfer files between your Apple computer and the timesharing system. The program leads you step-by-step into making your file transfers correctly.

By selecting Set Expected Prompt (Option P), you're able to change the "prompt" anticipated by your Apple, to communicate with RSTS/E systems that don't use the standard "READY" prompt. Choosing Resume Terminal Operation (option R) clears your monitor screen and returns operator control. Lastly, choosing EXIT (option E) automatically "logs off" your Apple, and terminates the VT100 Emulator program.

The VT100 Emulator program is written in Applesoft BASIC. To use it, you'll need: an Apple II Plus with 48K bytes RAM; or an Apple II with 48K bytes RAM and an Applesoft BASIC Firmware Card; or an Apple II with the Apple Language System. Plus: Auto-Start ROM; a video monitor or television; one or more Apple Disk II's (one with controller and 16-sector PROMs); an unmodified Apple Communications Interface Card; an acoustic coupler or modem; an account and password for logging on to a RSTS/E timesharing system.

With the VT100 Emulator package, you'll receive: 1) VT100 Emulator program diskette; 2) user instructions.

**PRICE: \$75.00**

**TITLE: WRITE - EDIT & SEND**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**HARDWARE REQUIREMENTS: Micromodem**

**DESCRIPTION:** Lets you enter a 16 line message - edit and save it, then automatically calls various ABBA Systems, logs you on and plays your message into the system(s). Save repeated typing; cut your long distance charges.

**PRICE: \$20.00**

# CP/M - Z80 SOFTCARD

## BUSINESS

40 ACCOUNTING SERIES ACCOUNTS PAYABLE . . . . .	CP/M-1
40 ACCOUNTING SERIES ACCOUNTS RECEIVABLE . . . . .	CP/M-2
40 ACCOUNTING SERIES GENERAL LEDGER . . . . .	CP/M-3
40 ACCOUNTING SERIES INVENTORY . . . . .	CP/M-5
ACCOUNTS PAYABLE . . . . .	CP/M-6
CLIENT LEDGER SYSTEM . . . . .	CP/M-7
DATEBOOK . . . . .	CP/M-7
GENERAL LEDGER ACCOUNTING SYSTEM . . . . .	CP/M-8
GENERAL LEDGER II . . . . .	CP/M-8
GLECTOR . . . . .	CP/M-8
HOTEL-2000 . . . . .	CP/M-8
INSOFT ACCOUNTANT . . . . .	CP/M-8
INSURANCE AGENCY MANAGEMENT SYSTEM . . . . .	CP/M-9
INVENTORY . . . . .	CP/M-9
MASTER TAX . . . . .	CP/M-10
MICROSTAT . . . . .	CP/M-10
NURSING HOMES . . . . .	CP/M-10
PAYROLL WITH COST ACCOUNTING . . . . .	CP/M-10
PRODUCTION MANAGER . . . . .	CP/M-11
PROFESSIONAL CLIENT BILLING III . . . . .	CP/M-12
REAL ESTATE SOFTWARE PACKAGE . . . . .	CP/M-12
STANDARD TAX . . . . .	CP/M-13
STRUCTURED SYSTEMS GROUP . . . . .	CP/M-13
TOTAL LEDGER . . . . .	CP/M-13
TOTAL PAYROLL . . . . .	CP/M-14
TOTAL RECEIVABLES . . . . .	CP/M-14

## COMMUNICATIONS

9 OFFICE PRODUCTIVITY SERIES TELECOMMUNICATIONS . . . . .	CP/M-16
BSTAM . . . . .	CP/M-17
CP/M TO APPLE CP/M . . . . .	CP/M-17
CROSSTALK . . . . .	CP/M-18
THE PROFESSIONAL SERIES . . . . .	CP/M-18
Z-TERM . . . . .	CP/M-20

## DATA BASE

DBASE II . . . . .	CP/M-21
HIERARCHICAL DATA BASE SYSTEM/HDBS . . . . .	CP/M-21
PEARL . . . . .	CP/M-22
SELECTOR III-C2 . . . . .	CP/M-22
TIM III . . . . .	CP/M-22
WHATSIT? . . . . .	CP/M-23

## MAILING LIST

9 OFFICE PRODUCTIVITY SERIES MAILING LIST MANAGER . . . . .	CP/M-24
NAD . . . . .	CP/M-25

## MEDICAL

DENTAL MANAGEMENT SYSTEM . . . . .	CP/M-26
MEDICAL MANAGEMENT SYSTEM . . . . .	CP/M-26
THE MEDICAL OFFICE MANAGER . . . . .	CP/M-26

## PERIPHERALS

LOADSTAR 8000 . . . . .	CP/M-28
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PROGRAMMING AIDS/UTILITIES

ALGOL-60 . . . . .	CP/M-29
APL/80 . . . . .	CP/M-29
BASIC COMPILER . . . . .	CP/M-29
BASIC UTILITY DISK . . . . .	CP/M-29
BASIC-80 . . . . .	CP/M-29
BDS C COMPILER . . . . .	CP/M-29
BUG and UBUG . . . . .	CP/M-30
CBASIC-2 . . . . .	CP/M-30
DEBUG I . . . . .	CP/M-30
DEBUG II . . . . .	CP/M-30
DESPool . . . . .	CP/M-30
EDIT . . . . .	CP/M-31
EDIT-80 . . . . .	CP/M-31
FORMS 2 . . . . .	CP/M-31
KBASIC . . . . .	CP/M-31
LINKER . . . . .	CP/M-31
M/SORT . . . . .	CP/M-31
MAC . . . . .	CP/M-32
MACRO II . . . . .	CP/M-32
MACRO-80 . . . . .	CP/M-32
MAGSAM III . . . . .	CP/M-32
MAGSAM IV . . . . .	CP/M-32
MULISP-80 . . . . .	CP/M-32
MUSIMP/MUMATH . . . . .	CP/M-33
NEVADA COBOL . . . . .	CP/M-33
PASCAL/M . . . . .	CP/M-33
PASCAL/MT . . . . .	CP/M-33
PASCAL/Z . . . . .	CP/M-33
PASM . . . . .	CP/M-33
PLINK . . . . .	CP/M-34
QSORT . . . . .	CP/M-34
RECLAIM . . . . .	CP/M-34
SID . . . . .	CP/M-34
STANDARD CIS COBOL . . . . .	CP/M-34
TEX . . . . .	CP/M-34
THE STRING BIT . . . . .	CP/M-35
TINY C . . . . .	CP/M-35
TOP . . . . .	CP/M-35
VSORT . . . . .	CP/M-35
XMACRO-86 . . . . .	CP/M-35
XYBASIC . . . . .	CP/M-35
ZAPPLE . . . . .	CP/M-36
ZEDIT . . . . .	CP/M-36
ZSID . . . . .	CP/M-36
ZTEL . . . . .	CP/M-36

WORD PROCESSING

9 OFFICE PRODUCTIVITY SERIES PEACHTEXT WORD PROCESSOR . . . . .	CP/M-37
9 OFFICE PRODUCTIVITY SERIES SPELLING PROOFREADER . . . . .	CP/M-39
LETTERIGHT . . . . .	CP/M-40
MAGIC WAND . . . . .	CP/M-40
MOONSHADOW TEXT FORMATTER/FOR UCSD PASCAL (TM) . . . . .	CP/M-40
SPELLGUARD . . . . .	CP/M-40
TEXTWRITER III . . . . .	CP/M-41
WORD-MASTER . . . . .	CP/M-41
WORD-STAR . . . . .	CP/M-42
WORD-STAR-MAIL-MERGE . . . . .	CP/M-42

## BUSINESS

**TITLE: 40 ACCOUNTING SERIES ACCOUNTS PAYABLE**

**PUBLISHERS NAME: PEACHTREE SOFTWARE**

**HARDWARE REQUIREMENTS: Two Apple II diskette drives. 132 column printer.**

**DESCRIPTION:** The Series 40 Accounts Payable package can be used as an independent application for the Apple II microcomputer or can be interfaced with the Series 40 General Ledger. Besides maintaining a complete file for each vendor, it will help determine which invoices to pay by due date or discount date or within certain cash requirements. By supplying the manager instant information on his accounts payable, it enables him to save money by claiming all discounts due him and helps him keep his vendor accounts current. It will print checks and a check register.

### FEATURES:

- \* Single transaction limit: \$9,999,999.99.
- \* Year to date total limit: \$21,000,000.00.
- \* Cash requirements forecast by due date.
- \* Aging Report showing amounts due each vendor classified into six time periods.
- \* Entry of monthly items for automatic posting of recurring invoices.
- \* Automatic posting to user defined General Ledger accounts for cash, discounts and accounts payable.
- \* Optional automatic posting to Series 40 General Ledger in summary.
- \* Option to prohibit deletion of invoices.
- \* Control reports provided for complete audit trails.
- \* Allows entry of prepaid invoices to properly maintain accurate vendor information.
- \* Distribution of each invoice to up to eight General Ledger expense accounts.
- \* Vendor File with complete current and year to date information on each vendor.
- \* Ability to apply credits to a specific invoice or as an open credit against a vendor record.
- \* Ability at any time to examine the status of any vendor, including current and year to date balances, as well as all current period transactions, with option to print a paper copy.
- \* Automatic selection of invoices for payment based on user defined discount and due dates; or manual selection of individual invoices for payment.
- \* Printing of checks with a detailed check stub listing all invoices paid by that check.
- \* Open invoice report in order by vendor code showing any available discounts, the total due for each vendor and the total due for all vendors.

### Reports.

1. Vendor File List: A listing of all information for each vendor in the file, including ID, current and year to date amounts and information on the last check written to the vendor.
2. Invoices/Credits Control Report: Provides an audit trail of all information entered during the entry routines.
3. Delete Invoices Control Report: An audit trail of all information entered during the Delete Invoices program.
4. Transaction Register: A detailed listing of all transactions for the current period in vendor ID order. A General Ledger Summary Journal is printed after the Transaction Register, showing the total debits and credits for all General Ledger distributions.
5. Examine Vendor Status: A listing of all information for a selected vendor, including current and year to date amounts and

all current period activity.

6. Open Invoice Report: A listing of all open invoices as of the date of the report, printed in vendor ID order.

7. Cash Requirements Report: A listing of all open invoices in due date order, showing the cash necessary to pay all invoices for each due date, along with the total credits. The total amount due each vendor is classified as:

Current.

1-30 days past due.

31-60 days past due.

61-90 days past due.

Over 90 days past due.

9. Check Register: A listing of the detail from each check printed, including the vendor name and ID, check number and date, all invoice numbers and amounts paid and the check amount.

10. Process End of Period: Produces a control report in summary, showing the total debits and credits distributed to each General Ledger Account.

Sample Capacities

Vendors: 350 Transactions per period: 200

Vendor records and transactions compete for the same disk space; therefore, when the number of vendors is lowered by one, two transactions can be added.

PRICE: \$400.00

**TITLE: 40 ACCOUNTING SERIES ACCOUNTS RECEIVABLE**

**PUBLISHERS NAME: PEACHTREE SOFTWARE**

**HARDWARE REQUIREMENTS: Two Apple II diskette drives. 132 column printer.**

**DESCRIPTION:** The Series 40 Accounts Receivable will help the user prepare bills for, and obtain timely collections from, his customers, thus minimizing lost or delayed revenues through bookkeeping errors or paperwork delays. It will print invoices, statements and aging reports and maintain customer account information, sales taxes and the accounting detail for posting to General Ledger. Accounts Receivable can be used with the Series 40 General Ledger.

**FEATURES:**

- \* Balance forward or open item customers or a combination.

- \* Six digit automatic or manual invoice number.

- \* Open credit reconciliation:

  - For all or selected customers.

  - By oldest invoice first.

  - To specific invoices.

- \* Ability to post summary transactions to the General Ledger.

- \* Examine customer status on the CRT or printer.

- \* Transaction consolidation for greater diskette capacity.

- \* Prints statements and invoices.

- \* Single transaction limit: \$9,999,999.99.

- \* Year to date total limit: \$21,000,000.00.

- \* Line discount per customer.

- \* Ability to enter sale transactions without having to print an invoice.

- \* Automatic customer billing option.

- \* Detail or summary Aging Report.

Customer Master File

- \* Up to six character customer ID.

- \* Tax rate.

- \* Current balance.

- \* Balance forward.

- \* Date and amount of last debit.

- \* Date and amount of last credit.

- \* Automatic billing amount.

## Transaction Information

### Ten types of transactions:

- \* Sales.
- \* Tax.
- \* Freight charge.
- \* Service charge.
- \* Payment.
- \* Credit.
- \* Adjustment.
- \* Return.
- \* Discount.
- \* Miscellaneous debits and credits.

### Reports

1. Print Customer Status: A "hard copy" option to the Examine Customer Status program showing information from the Customer File as well as all current period transactions and open transactions carried forward from previous periods.

2. Customer Account Report: A listing of the information in the Customer File, including the Customer ID, name and address, phone number, account type, and total balance due.

3. Reconcile Open Credits Control Report: Provides an audit trail of the transactions created by applying open credits to specific invoices, including:

Account ID and name.

Available open credit.

Invoice number to which the credit has been applied.

Amount of invoice.

Amount of the credit.

Remaining open credit for this customer.

4. Transaction Report: A listing of all transactions grouped by customer and age. Four age groups ranging from current to over 90 days past due are provided. The total balance due is listed for customers, as well as any open credit amounts.

6. Customer Statement: A complete listing of all activities for a customer's account during the current period, as well as the total balance due as of the statement date. Options are available to print statements for all or selected customers or for automatically billed customers.

### Sample Account and Transaction Capacities

Following are examples for the 125K Apple II diskettes:

Customers: 500 (maximum) / 300

Transactions per period: 400 (maximum) / 600

Customer records and transactions compete for the same disk space; therefore, when the number of customers is lowered the number of transactions can be raised by an equal number.

**PRICE: \$400.00**

## **TITLE: 40 ACCOUNTING SERIES GENERAL LEDGER**

**PUBLISHERS NAME: PEACHTREE SOFTWARE**

**HARDWARE REQUIREMENTS: Two Apple II diskette drives. 132 column printer.**

**DESCRIPTION:** The Series 40 General Ledger is the center of a compact series of interactive business application packages designed for the Apple II microcomputer made by Apple Computer, Inc. Used independently or in connection with other Series 40 packages, General Ledger allows the manager to maintain a complete financial picture of his business.

### **FEATURES:**

- \* 99 departments.
- \* Master and subsidiary accounts.
- \* Optional departmental income statements.
- \* Financial statements with subsidiary schedules.
- \* Automatic posting of transactions from other Series 40



packages.

- \* Single-transaction limit: \$9,999,999.99.
- \* Year to date total limit: \$21,000,000.00.
- \* Automatic repeating journal entries.
- \* Flexible chart of accounts set up to incorporate user's current accounting books.
- \* User-defined formatting of financial statements:
  - Eight account type codes.
  - Three balance column codes.

\* Comparative balance sheet and income statement with prior year information.

\* Automatic updating of the current earnings account.

\* Eight user defined source codes for identifying transactions posted to General Ledger.

#### Chart of Accounts File

The user can enter, change, delete or query information in this file, including:

- \* Five digit account number.
- \* Up to 25 alphanumeric characters for the account description.
- \* Account type (title, posting or totaling).
- \* Current account balance.
- \* Period beginning balance.
- \* Prior year financial comparison information.

#### Transaction File

Account number, transaction description, reference, source code, transaction date, transaction amount.

#### Reports

1. Chart of Accounts List: A listing of the contents of the Master File. Options include printing:

- \* All information for each account, including current and year to date dollar amounts and comparative.
- \* Current year information only.
- \* Report formatting information only.

2. Transaction Register: A listing of all transactions entered during the current period by:

- \* Account number.
- \* All or specific source codes.

3. Trial Balance: A listing matching each account in the Master File with the appropriate transactions in the Transaction File. The listing can be obtained in detail or in summary.

4. Balance Sheet: Summarizes the state of all asset, liability and capital accounts at the close of the period. Options include:

- \* Current year information only.
- \* Current year compared with previous year.
- \* Subsidiary schedules.

5. Income Statement: Reports the income and operating expense for the current accounting period. Options are:

- \* Current year information only.
- \* Current year compared with previous year.
- \* Departmental income statement.
- \* Subsidiary schedule.

\* Income ratio for comparisons to Net Income.

6. Examine Account Status: Lists, on the CRT or printer, selected accounts showing the beginning balance, current activity and current balance.

7. Enter Transaction Control Report: Lists all transactions for each session of the Enter Transactions program. Includes a summary that lists the total number of transactions and total number of debits and credits.

8. Delete Transactions Control Report: Lists all transactions deleted by the Delete Transactions program.

9. Transfer Summary Journals Control Report: Lists each General Ledger account number and amount transferred from other Series 4

packages.

**Sample Capacities**

Following are maximum capacities for the Apple II 125K diskettes:  
Accounts: 500 Transactions per period: 400  
Account records and transactions compete for the same disk space;  
therefore, when the number of accounts is lowered the number of  
transactions can be raised by an equal amount.  
**PRICE: \$400.00**

**TITLE: 40 ACCOUNTING SERIES INVENTORY**

**PUBLISHERS NAME: PEACHTREE SOFTWARE**

**HARDWARE REQUIREMENTS: Two Apple II diskette drives, 132 column printer**

**DESCRIPTION:** The Series 40 Inventory system offers the Apple II user detailed control over all facets of his inventory and assists him in shortening his inventory turnaround time, thus maximizing return on investment.

**Features:**

- \* Three price levels for each inventory item.
- \* Standard Cost or Average Cost option.
- \* Grouping of inventory items by department for more meaningful reporting.
- \* Inventory Master File containing information about sales and costs for the current period and year to date, as well as reordering information.
- \* Ability to examine the status of an inventory item at any time, with the option to print a "hard copy" of the information.
- \* Comprehensive management reports, including price lists, current period status reports, departmental summaries, physical inventory reports, reorder reports and period-to-date and year-to-date reports.

**Inventory Master File**

This file provides comprehensive information to accurately track cost and stock movement. It includes:

- \* Up to three-digit department numbers.
- \* Up to 15-character product code and description.
- \* Unit of measure (e.g., each, dozen).
- \* Vendor ID and item number (up to eight alphanumeric characters).
- \* One standard and two optional prices.
- \* Reorder level and quantity.
- \* Period beginning balance (in units).
- \* Current period activity (in units and dollars).
- \* Year to date sales and cost of sales.

**Transaction Type**

The Series 40 Inventory permits the entry of four types of transactions- sales, returns, receipts and adjustments.

**Reports**

1. Transaction Control Report: This serves as an audit of all inventory transactions entered during the session.
2. Examine Inventory Status: A "hard copy" option of the Examine Inventory Status program that shows the current period and year to date information on any item in inventory.
3. Inventory Status Report: A detailed listing of all current period activity, including beginning balance, period activity, current balance, current average cost and total valuation for each item. The report is available for all or specific departments.
4. Inventory Price List: A listing of the standard and optional selling prices, calculated balance on hand, item description and

vendor ID for each inventory item. The report can be printed for all specific departments.

5. Detail Inventory Report: A complete list of all data for each item in the Inventory File, including current average and last cost, the standard and optional prices, reorder level and quantity and all period to date and year to date information. The report is available for all or specific departments.

6. Departmental Summary Report: A one line summary of sales for each department, comparing it with the cost of sales and calculating the profit margin. This report can be used to determine the most profitable departments and which departments have the greatest inventory investment. The report is produced in department code order.

7. Physical Inventory Report: This is used to prepare worksheets to record the actual inventory count. The report shows each item number and description, the vendor ID and item number, as well as columns for entry of the actual balance and comments. Optionally, the report will print the calculated balance for each item. The report can be obtained for all or specific departments.

8. Reorder Report: This is prepared in vendor code order to help in reordering inventory items. All items at or below the reorder level established in the Inventory File will appear on the report.

9. Period to Date Report: A summary of net sales, cost of sales and margin for the current period and available for all or specific departments.

10. Year to Date Report: A summary of net sales, cost of sales and margin for each item in the year to date. This is available for all or specific departments.

Sample Capacity

The maximum number of items Inventory can handle with a 125K Apple diskette is 700.

PRICE: \$400.00

**TITLE: ACCOUNTS PAYABLE**

**PUBLISHERS NAME: UNIVAIR**

DESCRIPTION: This stand-alone program will produce all reports and checks necessary for a well rounded Accounts Payable System. All programs are menu-driven and the system performs all file calls, sorts, merges, and chaining back to the main menu with no operator input whatsoever. It will also automatically make the double-entry posting into our general ledger package which eliminates duplicate efforts and possible clerical errors. Reports include: Cash Requirements/Projections, Check Register, Check Printing, Vendor Master Lists, Open Invoice Register, Aged Open Invoices, and amounts due on or between any two dates or in a given month. Paid invoices are automatically deleted from the file. Cash Requirements Report automatically print out a 30 day, day-by-day recap of amounts due each time it is run. Vendor Master List shows current year amounts paid to each vendor compared to a prior year which serves as a vendor analysis. Aged Open Invoice Register Lists are unpaid invoices by vendor. Discounts can be taken with complete flexibility. Proper use of the Cash Requirements Projection Report can be a valuable tool in aiding cash flow. System will operate fully stand-alone, or can interface with our General Ledger for automatic double-entry posting into appropriate areas. Maintains a complete set of customer records with detailed, summary, and aged trial balances of all open invoices. Automatically ages current, 30, 60, 90 and 120 & older balances; includes credit and debit memos, invoice register, payment register, customer master lists and full customer file inquiry. Is programmed to automatically produce



computer-generated end-of-month statements on standard 8.5 by 11 inch continuous form paper for use with window envelopes. Has provisions to suppress zero balance statements so as to provide considerable savings in postage and materials.

**PRICE: \$500.00, Accounts Receivable - Balance Forward**  
**\$500.00, Accounts Receivable - Open Item Only**

**TITLE: CLIENT LEDGER SYSTEM**

**PUBLISHERS NAME: TCS**

**DESCRIPTION:** A multi-company General Ledger System designed specifically for public accounting firms and others who provide sophisticated accounting services for small business.

The CLS may be used by itself, or as part of the TCS Accounting System which includes Accounts Receivable, Accounts Payable, Payroll and Inventory Management.

The Client Ledger System includes the following features:

- \* A fully integrated Passive Payroll Sub-system which includes a Payroll Journal, 941 Worksheet, State Continuation sheet for reporting unemployment taxes, W-2's and 1099's.
- \* Virtually unlimited user-defined Profit and Loss Statement formats
- \* Ledger Consolidation (merges up to ten companies)
- \* Work in Process Sub-Ledger
- \* Both Budget and Prior Year Comparisons
- \* Three Levels of Departmental Summaries
- \* Multiple Current-Earnings Accounts
- \* Client Transmittal Letters
- \* Client List
- \* Batch Processing of Reports
- \* Interactive, Easy-to-use Programs
- \* Flexible Chart of Account Set-up
- \* Unique Password Access for Security
- \* Fully Departmentalized Reports
- \* Balance Sheets/Profit and Loss Statements with subsidiary Schedules
- \* Detail Trial Balance with optional annual detail
- \* Trial Balance Worksheet
- \* Transaction Registers Sorted by Account Number or by Source and Reference
- \* Cash Flow Statement and Statement of Changes in Financial Positions
- \* Depreciation Schedules
- \* Amortization Schedules Complete with "Rule of 78"
- \* Optional Auto-Repeating/Auto-Reversing Entry Types
- \* Standard Reports are 8 1/2" x 11"

**PRICE:**

**TITLE: DATEBOOK**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Program to manage time just like an office appointment book but using the speed and memory of a computer. Keeps track of three appointment schedules (three dental chairs, three attorneys, etc.) at once. Appointments consist of name, reason for the appointment, the date and time, and the length of the appointment. System can be quickly customized for the individual user. Many helpful features for making, changing, finding, and reporting appointments. Requires 48K CP/M and 18K bytes diskette storage. Requires 80 x 24 cursor addressable terminal. Specify 8080 CP/M or Z80 CP/M.

**PRICE: \$295 with manual, \$25 manual alone**



**TITLE: GENERAL LEDGER ACCOUNTING SYSTEM****PUBLISHERS NAME: UNIVAIR**

**DESCRIPTION:** Has a complete chart of accounts file setup and maintenance for either a single user or can be used as a client write-up system by a CPA. All programs are menu-driven automatically with no operator input whatsoever. Accounts have unlimited sub-scheduling routines as well as 10 different accumulator options which print out totals at the end of the general ledger. Comes complete with a manual post-only payroll, employees file maintenance, check register and disbursements, journal voucher register, profit and loss statement, balance sheet, comparison reports, chart of accounts report, working trail balance, MTD and YTD totals. Interfaces with the Medical and Dental Management Systems, Accounts Payable, Accounts Receivable, Payroll, Insurance Agency, and Real Estate Agency Systems for automatic double-entry posting. The operator should have at least a basic working knowledge of double-entry accounting.

**PRICE: \$500.00****TITLE: GENERAL LEDGER II****PUBLISHERS NAME: CPAIDS**

**DESCRIPTION:** Designed for CPA's. Stores complete 12 month detailed history of transactions. Generates financial statements, depreciation, loan amortizations, journals, trial balances, statements of changes in financial position, and compilation letters. Includes payroll system with automatic posting to general ledger. Prints payroll register, W2's and payroll checks.

**PRICE: \$450 with manual, \$30 manual alone****TITLE: GLECTOR****PUBLISHERS NAME: CPAIDS**

**DESCRIPTION:** General Ledger option to SELECTOR III-C2. Interactive system provides for customized COA. Unique chart of transaction types insure proper double entry bookkeeping. Generates balance sheets, P&L statements and journals. Two year record allows for statement of changes in financial position report. Supplied in source. Requires SELECTOR III-C2. CBASIC-2 and 56K system.

**PRICE: \$350 with manual, \$25 manual alone****TITLE: HOTEL-2000****PUBLISHERS NAME: UNIQUE INFORMATION SYSTEMS, INC.****HARDWARE REQUIREMENTS: two disk drives or hard disk**

**DESCRIPTION:** HOTEL-2000 is a microcomputer based hotel management system. It includes all the specific hotel functions: Reservations, Reception and Billing in one integrated package (see the enclosed information packet). Each module may also be purchased separately and you may add various general business applications (Accounting, Payroll, Word Processing, Inventory and more) at a small additional cost. It is a "user-friendly" system which guides you with "menus" and messages and requires no previous computer experience whatsoever.

**PRICE: \$4950.00 to \$9990.00****TITLE: INSOFT ACCOUNTANT****PUBLISHERS NAME: INSOFT CORP.****HARDWARE REQUIREMENTS: 132 column printer, 2 Disk drives**

**DESCRIPTION:** The INSOFT ACCOUNTANT is a professional menu-driven  
CP/M-8

accounting system organized into four packages - General Ledger, Accounts Receivable, Accounts Payable, and Payroll. The system handles departments, prints invoices, statements, expenses, aged accounts receivables and payables, payroll checks, and W-2's. Federal, state, and local taxes can also be accommodated. Each package may be used independently or will post directly to the General Ledger. The INSOFT ACCOUNTANT is supplied with comprehensive training manuals and complete data files for training and practice prior to actual installation.  
**PRICE: \$365.00**

**TITLE: INSURANCE AGENCY MANAGEMENT SYSTEM**

**PUBLISHERS NAME: UNIVAIR**

**DESCRIPTION:** This package is designed for use by an independent insurance agency which handles both personal and commercial lines of property and liability insurance from various underwriters. Provisions are made for many different rates of commissions payable to an agency by a single underwriter, depending upon the type of coverage offered. Complete office file setup is provided, along with commission rates to be paid to each individual producer, and automatic file scanning for policy renewal notices which have to be generated. A receivables package prints out monthly statements on amounts due on commercial insurance lines, and lists the commissions due from underwriters on renewals from personal insurance lines. Client data and policy entries and renewals are all handled on video screen with extremely easy editing. Report sections include: current policies, customer master alphabetic and/or numeric, agency commissions earned MTD/YTD by underwriter, producer commissions earned MTD/YTD, master list of underwriters and types of coverages available, loss history files, and an inter-office assignable insurance code system. Will operate completely stand-alone, or can post into our General Ledger Package for automatic double entry accounting.  
**PRICE: \$750.00**

**TITLE: INVENTORY**

**PUBLISHERS NAME: PEACHTREE SOFTWARE**

**DESCRIPTION:** The success of sales and distribution businesses is largely a function of their inventory control skills. The system produces information that assists management in maximizing inventory turns and hence return on investment. A detail report contains comprehensive data on each item, including pricing, sales history, and ordering information. The availability of an item can be checked quickly using the status report which shows units on hand. The transactions program allows for rapid entry of sales, receipts, and adjustments and produces summaries for management review and control. The physical inventory worksheet allows for easy comparison of actual quantities with book quantities. Will automatically flag items to be reordered; contains multiple prices for each item.  
**SYSTEM STRUCTURE:**  
Outputs - \* Inventory Status Report \* Department Summary \* Reorder Report \* Detailed Inventory List \* End-of-Period Report \* End-of-Year Report \* Physical Inventory Worksheet \* Inventory Price List  
Programs - \* Inventory File Maintenance \* Report Generation \* Transactions Processing \* End-of-Period Processing  
For further information, visit your local dealer, who will be glad to demonstrate the software, generate sample reports, and

allow you to examine in detail the users guide.

**PRICE:**

**TITLE: MASTER TAX**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Professional tax preparation program. Prepares schedules A,B,C,D,E,F,G,R/RP,SE,TC,ES and forms 2106, 2119, 2210, 3468, 3903, 2441, 4625, 4726, 4797, 4972, 5695 and 6251. Printing can be on readily available, pre-printed continuous forms, on overlays, or on computer generated, IRS approved forms. Maintains client history files and is interactive with CPAids

**GENERAL LEDGER II**

**PRICE: \$995/\$30**

**\$350, Annual Update Fee**

**TITLE: MICROSTAT**

**PUBLISHERS NAME: ECOSOFT**

**DESCRIPTION:** MICROSTAT, the most powerful statistics package available for microcomputers, is completely file-oriented with a powerful Data Management Subsystem (DMS) that allows you to edit, delete, augment, sort, rank-order, lag and transform (11 transformations, including linear, exponential and log) existing data into new data. After a file is created with DMS, Microstat provides statistical analysis in the following general areas: Descriptive Statistics (mean, sample, and population S.D., variance, etc.), Frequency Distributions (grouped or individual), Hypothesis Testing (mean or proportion), Correlation and Regression Analysis (with support statistics), Non-parametric Tests (Kolmogorov-Smirnov, Wilcoxon, etc.), Probability Distributions (8 of them), Crosstabs and Chi-square, ANOVA (one and two way), Factorials, Combinations and Permutations, plus other unique and useful features.

MICROSTAT requires 48K, Microsoft MBasic with CP/M and is sent on a single density 8" Disk.

**PRICE: \$250.00, \$15.00, Users Manual**

**TITLE: NURSING HOMES**

**PUBLISHERS NAME: BEACHWOOD SOFTWARE DIVISION**

**DESCRIPTION:** Beachwood software is for nursing homes and other long-term care facilities. It keeps patient statistics, and spending accounts, and provides other business accounting functions. It will handle the New York State Chart of Accounts. The software will operate on microcomputers using CP/M or CP/M-compatible system software.

**PRICE:**

**TITLE: PAYROLL WITH COST ACCOUNTING**

**PUBLISHERS NAME: UNIVAIR**

**DESCRIPTION:** System is designed to be run completely stand-alone, or will post into our General Ledger for double-entry accounting. System is designed to provide management of all the necessary city, state, and federal payroll reports and functions. Employee file setup is done on video screen and takes about 5 minutes for input. Thereafter, all that is necessary is to select the current week for processing and all employees scheduled to be paid have computer-generated checks written, with the appropriate deductions withheld from their pay and posted into their MTD/QTD/YTD history files. When used with General Ledger, each of these deductions is posted into the correct expense accounts. System can handle hourly, weekly, semi-monthly, monthly, and

**CP/M-10**



salaried employees simultaneously, and has provisions for up to 10 voluntary deduction/garnishment categories. Can handle up to 500 employees on 1 double-density floppy disk. A complete operators manual carefully explains all areas of setup and operation.

PRICE: \$500.00

#### **TITLE: PRODUCTION MANAGER**

##### **PUBLISHERS NAME:**

**DESCRIPTION:** The TCS Production Manager package is designed to interface with the TCS Total Inventory package and provide the specialized inventory needs of the small to medium size manufacturing business.

The package is designed to perform the following tasks:

- 1) record current inventory levels on an item by item basis for all parts, assemblies, and finished goods.
- 2) maintain a multi level assembly file detailing parts and assemblies that make up assemblies and finished goods with full cost breakdown at every level.
- 3) automatically update inventory items as assemblies and finished goods are produced.
- 4) assist in material requirements planning and purchasing.
- 5) generate a bill of materials for every finished goods product manufactured.
- 6) automatically update cost of assemblies and finished goods as inventory parts costs change.

Each program within the system contains a complete set of prompts and other helpful messages to allow even an inexperienced operator to make full use of the system with minimal instruction time.

The TCS Production Inventory system features:

- interactive menu driven programs
- self instructing user documentation
- fast, flexible data base access
- sample data for demonstration and training
- control reports for full audit trail
- assembly file list referenced to part or drawing numbers
- production report showing products made and parts of assemblies used from inventory
- produces parts bin labels
- isolates inventory items no longer used in production
- prints a bill of materials for every product
- determines number of each part necessary to build a product as of a scheduled production date
- generates purchase orders for parts for a given production run
- interfaces with TCS Total Payables and TCS Total Inventory to generate and post purchase orders

##### **System Design**

The TCS Production Inventory system is designed around an Assembly File which organizes items from the Inventory Master File by their relationship to assemblies or finished good products. Each assembly record calculates the total value for all parts in the assembly. Additional information for each record includes reference numbers for engineering drawing numbers and parts list numbers, next higher assembly, user comments, and page references to relate multiple assemblies to the finished product. The system also features the ability to update assemblies and finished goods values as individual parts prices change.

Once data has been entered into the Inventory Master File and Assembly File, the user can enter the quantity of assemblies or finished products made and the computer will automatically subtract the parts used and add the goods produced to the



inventory. A control report is printed for approval prior to actually updating the inventory master file. The Production Inventory system can also aid in material requirements planning. From the Assembly File a bill of materials is generated for every finished good product. From this bill of materials and the inventory data stored in the Inventory Master File (lead time, rate of sales, current balance, etc.) the system can recommend quantities of parts to purchase for a given production run size and production date. When used with the TCS Total Payables package, the Production Inventory system will also generate purchase orders to the appropriate vendors.

**PRICE:**

**TITLE: PROFESSIONAL CLIENT BILLING III**

**PUBLISHERS NAME: SERENDIPITY SYSTEMS, INC.**

**HARDWARE REQUIREMENTS: 80 column printer, 56K CP/M, 16K additional memory card or Pascal Language card, and dual drives**

**DESCRIPTION:** The complete billing and management reporting software system developed for lawyers and other professionals. Bills and summary statements automatically rendered at month-end, or on request. Single-sheet or continuous-form printing optional. Clients may be billed for any combination of time units, expenses incurred, and/or fixed monthly fee. Standardized services can be charged at a pre-established rate or fee, or at any individually assigned amount. Clients may also be charged at the responsible professional's regular hourly rate, or at a special rate. Grouping of charges by case, optional; caseload per client unlimited. Bills may be rendered for individual services, complete or partial cases. Preliminary Bill of individual hours inventory and/or expenses to-date produced for discretionary review. Preliminary Bill of authorized charges only doubles as file copy. Final Bills may provide client with:

- \* Details and descriptions of all charges as services performed
- \* Additional, individual explanatory notations of unlimited length
- \* All time units and/or expenses noted, but not charged
- \* All details suppressed, summary totals of time and expense charges only
- \* Fixed monthly fee only, without time or expense details noted or charged

**SYSTEM CAPABILITIES:**

- \* 2500 transaction entries per month
- \* 49 professionals or practice areas
- \* 999 standardized legal services
- \* 12 standard billing rates
- \* 8-digit client identifier code

Monthly transaction capacity is limited by computer memory available. A typical distribution for a 64K system using dual single-sided, double density, 8" drives (1/2 megabyte of storage), might be 5 transactions each for up to 600 clients.

**PRICE:**

**TITLE: REAL ESTATE SOFTWARE PACKAGE**

**PUBLISHERS NAME: KEY SYSTEMS, INC.**

**DESCRIPTION:** According to the company the Key Realty Management System provides the real estate executive with immediate, up-to-date information regarding the status of his/her operation. It is a combination of easy-to-use, fully documented software, created for real estate decision makers. Since no special codes, abbreviations or 'computerese' appears to the user, no data processing expertise is necessary to get full benefits from the

system, the company said.

The system is comprised of five control subsystems including Listing Control, Escrow Control, Sales Control, General Ledger and Property Management. Optional subsystems for Accounts Payable and Payroll are also available. The minimum system provides for up to 300 listings, 100 sales associates and 10 offices or sub-offices.

Listing Control, one of the primary information centers required in successful real estate operations, is provided to the realtor in a simplified form, the company said. By merely entering appropriate identifier, the realtor sees at a glance a full description of a property including dimensions of every room, floor and wall coverings, special built-in equipment, and important sales features such as location, type of property (e.g. Ocean Front).

Sales Control records the following data for each month for every salesperson and office in both volume and quantity: new listings, accepted contracts, closures, relocation commissions, commissions from listings, commissions from sales and all activities monthly for 12 consecutive months plus year-to-date, as well as this month, year-to-date, this month last year and last year to date.

Property Management is ideal for realtors engaged in professional management of an owner's property, the company said. Included are all necessary income and expense reports as well as the ability to handle up to 52 different rentals of a single property annually.

The Key Realty Management System is available from computer retail outlets across the country or directly from Key Systems, Inc.

**PRICE: \$2500, Basic System**

**\$500, each subsystem, as well as optional Accounts Payable and Payroll.**

**TITLE: STANDARD TAX**

**PUBLISHERS NAME: CPAIDS**

**DESCRIPTION:** As above for schedules A,B,C,D,E,G,R/JP,SE,TC and forms 2106 and 2441.

Also, does not maintain client history files.

**PRICE: \$495 with manual, \$30 manual alone, \$175 Annual Update Fee**

**TITLE: STRUCTURED SYSTEMS GROUP**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Complete interactive accounting software for business. Each product can be used stand-alone or with automatic posting to the general ledger. Each product is thoroughly tested and very well documented.

**PRICE:**

**GENERAL LEDGER - \$820 with manual, \$40 manual alone**

**ACCOUNTS RECEIVABLE - \$820 with manual, \$40 manual alone**

**ACCOUNTS PAYABLE - \$820 with manual, \$40 manual alone**

**PAYROLL - \$820 with manual, \$40 manual alone**

**INVENTORY CONTROL - \$820 with manual, \$40 manual alone**

**TITLE: TOTAL LEDGER**

**PUBLISHERS NAME: TCS**

**DESCRIPTION:** Designed to (1) record your financial transactions and balances of those transactions, (2) provide accurate and timely statements (Balance Sheet and Income Statement) that describe your current financial position and (3) provide you with comparative data on your financial position at various points

over a two-year time frame. The TOTAL LEDGER is regarded as a financial history that accurately records what transactions have taken place during a given accounting period.

The TOTAL LEDGER system is part of the TCS TOTAL ACCOUNTING SYSTEM designed to meet all of your accounting needs. Includes TOTAL RECEIVABLES, TOTAL PAYABLES and TOTAL PAYROLL in addition to the TOTAL LEDGER system. Each can operate independently, in concert with the TCS TOTAL ACCOUNTING SYSTEMS, with the standard TCS Accounting packages, or with your own existing accounting system.

Particular features of the TOTAL LEDGER include:

- \* Interactive, menu-driven programs
- \* Self-instructing user documentation
- \* Flexible Chart of Accounts set-up
- \* Comparative financial statements
- \* Control reports that provide audit trails
- \* Fast, flexible data base access
- \* Number of master & transactions limited only by available disk space
- \* Departmental accounting
- \* Automatic interface with other systems
- \* Sample data for demonstrations & training
- \* Twelve month detail transaction history available

**PRICE:**

**TITLE: TOTAL PAYROLL**

**PUBLISHERS NAME: TCS**

**DESCRIPTION:** Designed to 1) record the employment history of each employee in a company, 2) allow departmentalized reporting of employees and 3) keep current, quarterly, yearly, and monthly totals for each. It has user-specified information to compute state and federal taxes, 941's and W-2's, and allows users to calculate weekly, biweekly, monthly and semi-monthly salaries.

A complete set of prompts and other helpful messages to allow even an inexperienced operator to make full use of the system with minimal instruction time, is contained within the system.

Designed to interface with the TCS TOTAL LEDGER system to provide automatic monthly journal entries to the Chart of Accounts, or it may be run independently with your existing accounting system.

Particular features of the TOTAL PAYROLL include:

- \* Interactive, menu-driven programs
- \* Self-instructing user documentation
- \* Fast, flexible data base access

**PRICE:**

**TITLE: TOTAL RECEIVABLES**

**PUBLISHERS NAME: TCS**

**DESCRIPTION:** A complete invoicing and monthly statement generating system which keeps track of current and aged accounts receivable.

Designed to (1) maintain a record for each customer including the customer's name, address and phone number, (2) keep track of the customer's type of account, current balance, tax rate and other useful account status information and (3) provide full invoicing and statement capabilities.

Each program within the system contains a complete set of prompts and other helpful messages to allow even an inexperienced operator to make full use of the system with minimal instruction time.

The TOTAL RECEIVABLES system interfaces with the TCS TOTAL LEDGER system to provide automatic monthly journal entries to the Chart of Accounts. It may also be run independently with your existing

accounting system.

Particular features of the TOTAL RECEIVABLES includes:

- \* Interactive, menu-driven programs
- \* Self-instructing user documentation
- \* Fast, flexible data base access
- Sample data for demonstrations and training
- \* Open item or balance forward accounts
- \* Special consolidation feature for greater capacity
- \* Flexible open credit reconciliation
- \* Automatic custom billing option
- \* Statement and invoice printing on plain paper or pre-printed forms
- \* Automatic interface with TCS TOTAL LEDGER and TCS General Ledger
- \* TCS TOTAL LEDGER or TCS General Ledger update available without compression of Transaction File
- \* Quantities on invoicing allow fractional units to three places
- \* Transaction reports (with totals) within user-specified data limits

**PRICE:**



## COMMUNICATIONS

### TITLE: 9 OFFICE PRODUCTIVITY SERIES TELECOMMUNICATIONS

PUBLISHERS NAME: PEACHTREE SOFTWARE

HARDWARE REQUIREMENTS: 132 column printer, two disk drives

DESCRIPTION: The Series 9 Telecommunications by Peachtree Software is a high performance yet easy-to-use data communications software package. Designed to operate on a CP/M - based microcomputer with a modem, Telecommunications provides electronic communications capabilities previously limited to much larger computer systems.

With Telecommunications, the user's computer can communicate with other computers, including time-sharing systems, large-scale computers, subscription "information utilities," public access "bulletin boards" and other Telecommunications users. In a matter of minutes, via regular telephone lines, the Telecommunications user can send or receive a document or data file around the block - or around the world.

Common uses for Telecommunications include:

- \* Sending and receiving PeachText word processing documents, one at a time or in batches.
- \* Collecting data from remote sites for central processing and optional return of computed results.
- \* Capturing data received from time-sharing services and information utilities to review and edit with PeachText.
- \* Transferring software from one media disk format to another.
- \* Employing remote software maintenance support through transmission of program updates and corrections.

#### FEATURES:

- \* Easy to use. Telecommunications' capabilities can be mastered in a few minutes. A comprehensive Peachtree user's manual provides step-by-step instructions and examples of each of the package's features.  
All of Telecommunications' programs are displayed on a menu for easy selection and use. In addition, users of Peachtree's PeachText Word Processor can call Telecommunications directly from the PeachText menu. After sending or receiving the indicated document, Telecommunications can automatically return to the PeachText menu for additional word processing.
- \* Powerful. Our Telecommunications package allows the automatic sending and receiving of disk files and documents along with the unattended answering of the telephone line. It will operate in Originate or Answer modes, full- or half-duplex. Fully error-checked file transfers are made using sophisticated error-detection techniques (16-bit CRC protocol). Automatic retransmission of errors and time-out recovery ensure a high level of data integrity.  
The size of the transferred file is not limited to the computer's memory size, since Telecommunications continuously monitors the receiving file and "captures" it by writing it in portions onto the disk. A concurrent video and printer facility allows the data optionally to be printed as it is being displayed. If supported by the user's modem, Telecommunications will perform auto-dial, redial and auto-answer functions.
- \* Flexible. Telecommunications operates under the CP/M operating system on most 8080-type microcomputers having 48K or more bytes of memory. At least one flexible (floppy) disk unit is required.

#### TELECOMMUNICATIONS MENU

Here are several highlights from the Telecommunications package menu:

- \* Send Document: This function prompts the user for information the Telecommunications package needs to send a document or file, such as the telephone number and document name.

Redialing is allowed with Telecommunications and CP/M "ambiguous" file references, such as XYP., are allowed. Then while the file is being sent, Telecommunications uses its error-detection techniques to ensure, record by record, that the document is being sent. The package displays a count of records sent and number of retry attempts. The user is notified if the file name to be sent occurs on the receiving unit and overwriting is not allowed.

Telecommunications will notify the user if the receiving disk or directory is full.

- \*Request Document: This operates in much the same way as the Send Document feature, but the user is requesting that a document be sent to his machine from one prepared to transmit it.
- \* Wait for Call. This menu selection places the user's computer in the proper mode to receive a transmission. The user has the option to disallow overwriting of a file with the same name as that being transmitted. If left unattended, the terminal screen continuously retypes a line of asterisks to show the package is in this mode. The Telecommunications menu also displays a message showing when the computer is "connected to remote" as an operator aid.
- \* Select Printer Log. This allows a printout to be made of file names sent or received and whether the activity for each file name was successful. This is used primarily with Wait for Call or when sending or receiving a number of files.
- \*Enter Terminal Mode. This converts the user's system into a "smart" terminal for use with time-sharing facilities. The user can specify full- or half-duplex mode and can decide whether he wants the characters transmitted to him, copied to the printer or recorded to the disk. This selection allows use of the auto answer-back feature and XON/XOFF protocol of the TWX network.
- \* Auto-Type Document. With this, PeachText or ASCII CP/M files can be sent to the modem. Files can be edited off-line and then quickly transmitted by Telecommunications when expensive connection time to a time-sharing computer or information utility is at a premium.
- \*Hang-Up Phone. An automatic feature for users of the Hayes Smartmodem.
- \* Rename Document. This allows CP/M file names to be altered for transmission or reception.
- \*Get Help! This feature provides a user's self-helplist - phone numbers, passwords, what to do in certain situations, etc.

**PRICE: \$375.00**

**TITLE: BSTAM**

**PUBLISHERS NAME: CPAIDS**

**DESCRIPTION:** Utility to link one computer to another also equipped with BSTAM. Allows file transfers at full data speed (no conversion to hex), with CRC block control check for very reliable error detection and automatic retry. We use it! It's great! Full wildcard expansion to send. COM, etc. 9600 baud with wire. 300 baud with phone connection. Both ends need one. Standard and versions can talk to one another. This software requires a knowledge of assembler language for installation.

**PRICE: \$150 with manual, \$10 manual alone**

**TITLE: CP/M TO APPLE CP/M**

**PUBLISHERS NAME: COMPUTER SHACK**

**DESCRIPTION:** CP/M TO APPLE CP/M will transfer your CP/M programs to Apple CP/M (or other way) for only \$10 per program or file. COM, TEXT OR BAS. One day turnaround. Discounts available.

**CP/M-17**

Master Charge/VISA. Send 5 inch or 8 inch in 3740 or IMDOS format. \$4 for Apple diskette. UPS free!  
**PRICE:**

**TITLE: CROSSTALK**

**PUBLISHERS NAME: MICROSTUF, INC.**

**DESCRIPTION:** Data communications can open up a whole new world to you and your computer. A world of the future. Now. A world full of information resources, time-sharing computer systems, and electronic "bulletin boards." All you need for admission to this world is your CP/M-based computer, a modem, and the proper software. That's where we come in. We have the proper software, CROSSTALK, our smart terminal & file transfer programs for CP/M, allows you to call into thousands of dial-up computer systems around the world, and communicate with them. REMOTE, our CP/M remote console program, allows you to operate your CP/M system from a remote terminal, giving your computer added flexibility and usefulness.

- \* Allows your computer and modem to communicate with other computers, including other CROSSTALK systems, public-access "bulletin board" systems, main frame computers, subscription "information utilities" such as THE SOURCE, and much more.
- \* Simple, easy to use "plain English" command structure makes CROSSTALK easy to learn, yet provides a powerful tool for exchanging files, capturing data, and controlling modem parameters.
- \* Concurrent printer and video allows you to print data while viewing it on the CRT.
- \* Fully error-checked file transfers using 16 bit CRC protocol. Protocol transfers allow exchanging files which are larger than the system's memory.
- \* Built in "DIR" command.
- \* Data capture allows saving received data onto your disk.
- \* Auto-dial, redial, and auto-answer (if supported by modem).

**REMOTE**

- \* Allows remote use of your computer from a remote terminal location.
- \* May be called as a subroutine from BASIC, PASCAL, or any other program to allow answering under program control.
- \* Provides nulls if needed for printing terminals.
- \* Uses less than 1K of memory space.
- \* Automatically selects proper baud rate.
- \* Available for S-100 modems (Hayes and PMMI) only.

**PRICE:**

**TITLE: THE PROFESSIONAL SERIES**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** S.D.S. now offers the complete "The Professional" series line of software to meet your most demanding communications needs. The series consists of ASCII EXPRESS "The Professional" for standard Apple DOS, P-TERM "The Professional" for the PASCAL Apple, and Z-TERM "The professional" for Apple CP/M. All three programs operate nearly identically and are fully conversant with each other.

The Professional series provides sophisticated software for which ever operating system you prefer.

Unlike many other packages which can only make vague claims, The Professional Series software line delivers virtually every feature you could ever use in smart terminal software.

**SOME FEATURES OF THE "THE PROFESSIONAL" SERIES**

- \* Supports All current modem devices!
- \* Supports All 80 column boards!

**CP/M-18**



\*Easily configured to full compatibility with Any asynchronous dial up host!

\*Sends Any Type of file to another Apple, regardless of size (see individual descriptions for more details!)

\*All packages are 1200 baud compatible, when interfaced with a 1200 baud interface card and Bell 212 or Vadic standard modem. In addition, The Professional series supports external terminals with standard interface cards. When used with an external terminal or 80 column card, they support full terminal emulation modes. Ideal for hosts utilizing screen oriented display with text editors or database.

All professional series packages can be interrupt driven and have type-ahead keyboard and printer "ring buffers". This means that incoming data is never lost- even if your 80 column display board or printer is unable to keep up with the data flow. With interrupts, you can even execute most menu commands and never lose incoming data.

One of the more powerful features of The Professional series is the extensive macro capability of each system. Macros traditionally are a time-saving, and error reducing way of outputting entire strings with simple keystrokes. In The Professional series, this has been carried a few steps further. Each macro string in this series can be an actual "mini-program" which contains not only simple strings, but numbers for auto-dialing, and internal system commands with interactive options. This means you can dial, log-on to the host computer, and execute commands to either the host or the program. On many hosts you could even receive files, log off and hang up, ALL AUTOMATICALLY! The most important aspect of any communications package is the flexibility given the user in terms of data transfer modes. There is a great diversity in the variety of host computers currently in use throughout the world. One must consider such factors as whether the host is line oriented in nature or not, and if so, does it accept a prompt? Also, can the host accept full 300 or 1200 baud throughput, and does it echo incoming data? The "Professional Series" software line provides the most flexibility available in any software. By simply selecting the appropriate modes, you can send data to ANY host with ease!

Full TouchTone dial support is offered with the Novation Apple CAT modem. Also, with this device, automatic dialtone detect is standard and will allow multistage dialing such as with common carrier services that require an access number, wait for tone, dial another series of numbers, etc. conventional pulse (rotary-type) dialing can be combined with TouchTone for use in situations where all TouchTone dialing is not possible.

The Apple CAT voice mode allows The Professional series and the Apple CAT to act like a telephone; place TouchTone calls, converse with a standard telephone receiver plugged into the modem. Incoming calls can also be answered with this mode. Switching from voice to modem is easily accomplished for the transfer of programs or files.

A conversive CHAT mode allows two operators to "talk" with each other in real time on the screen, greatly simplifying transfer of files and programs in the attended mode.

When the modem hardware supports it (which includes external modems), The Professional series offers full auto-answer and unattended operation modes supporting sending or receiving of files, disk directories and other functions. The are access code protected so unauthorized callers cannot access important files. It is occasionally useful to know EXACTLY what a particular host is sending especially in regards to control characters, which are normally invisible to a receiving system. In this series, the Show-Control-Character Diagnostic mode includes display of control characters, parity, framing and over run errors.



All programs in The Professional Series are operationally similar, and include all the features described in the preceding pages. Different operating systems, however, do create minor differences. These, along with general system requirements, are listed below.

Ascii Express "The Professional" offers macros that may also contain system parameters. In addition to loading in the number to be dialed, command sequences, etc., the entire system can also be instantly reconfigured in terms of duplex, baud rate, parity, terminal emulation, etc.

Since the standard Apple DOS lacks the more sophisticated editors which are included in the PASCAL environment and C/PM operating systems, Ascii Express "The Professional" offers a versatile built-in line editor which allows you to create and edit files before or after transfer.

Has all features of the standard Z-TERM package in addition to the "Professional Series" features described above.

Sends and receives all C/PM file types including COM files; also offers the PAN mail transfer mode. Fully compatible with any other programs utilizing the CHRISTENSEN protocol: MODEM, XMODEM, LMODEM, CMODEM, etc.

Compatible Z-80 cards:

Advanced Logic Systems Z-Card or Synergizer System or Microsoft Softcard

PRICE: \$129.95	Ascii Express
\$129.95	P-TERM
\$149.95	Z-TERM

#### **TITLE: Z-TERM**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** A flexible communications package for the Apple II equipped with Z80 Software and the CP/M environment. Allows file transfers to or from all types of dial-in systems. Fully supports Micromodem II and most other communication devices, as well as 80 column display boards and external terminals! Utilizes standard CP/M sequential text files, with up to a 40K internal buffer (using additional RAM or language card). Supports multiple modes of data transfer and includes keyboard macros, auto-dial (with Micromodem II), and upper.lower case. On 16 sector diskette.

**PRICE: \$74.95**

## DATA BASE

### **TITLE: DBASE II**

#### **PUBLISHERS NAME: ASHTON-TATE**

**DESCRIPTION:** With dBASE II you can extend the power of your microcomputer to jobs that were previously reserved for the larger mainframes. Here's a partial list of applications that dBASE II has been used for: General Ledger, Journal of Accounts, Accounts Receivable, Accounts Payable, Sales Tax Records, Payroll, Check Management and Writing, Time Billing, Inventory Control, Job Costing, Tax Computation, Document Cross Referencing, Legal Office Accounting, Scheduling, mailing Labels, Calendar Events. If your application calls for managing data, dBASE II may be the answer.

You can create a database and start entering data into it in less than a minute.

Type CREATE, then respond to the dBASE II prompts to name the file and define the fields in your records as shown in the first photo.

Once the record is defined, you can start entering data immediately, or add information later by typing APPEND. In both cases, dBASE presents you with an entire record structure for which you simply fill in some or all of the blanks.

#### **PRICE:**

### **TITLE: HIERARCHICAL DATA BASE SYSTEM/HDBS**

#### **PUBLISHERS NAME: MICRO DATA BASE SYSTEMS, INC.**

**DESCRIPTION:** A major breakthrough in data handling for micros! At best, existing programming languages provide only rudimentary file handling capabilities. With HDBS (Hierarchical Data Base System), you can now transform your programming language from an ordinary file handling system into a flexible, powerful, and productive data base management system.

HDBS provides the two components any genuine data base system must have:

- 1) The data Description Language (DDL), an easy-to-use, stand-alone language for specifying blueprints or schemas of data base organization.
- 2) The Data Manipulation Language (DML) for manipulating (storing, accessing, modifying, deleting) data organized according to a data base blueprint. The DML extends your data handling capabilities by allowing you to embed powerful data manipulation commands in the programs you write. The commands are stated through the "CALL" facilities of your programming language.

HDBS users are...

- free of the need to design files.
- free of the need to merge files; there is no scattering of data over several files. Records of many different types are automatically maintained in a single, integrated organization...one that can be spread over numerous disk drives.
- free of the need to be concerned with disk I/O because it is handled automatically by HDBS.

HDBS offers...

- hierarchical schema designs.
- data base schemas of up to 254 record types; each record type may contain up to 255 fields. The size of a field may be up to several thousand bytes in length.
- data bases spread over one to eight disk drives. HDBS is independent of the sizes and types of drives.
- user-defined names for fields, record types, and sets.
- records maintainable in several sorted orders...and in other orders as well.

-written in machine language for maximum execution efficiency and minimal memory usage.

-available versions: Z80 (requires approx. 18K) 6502 (approx. 26K), 8080 (approx. 22K). Total memory requirement must allow for buffer areas.

HDBS can be used to extend any of the following programming languages under the indicated operating systems;

CP/M with CBASIC; Microsoft BASICs, FORTRAN or COBOL; InterSystem PASCAL/Z; Sorcim PASCAL/M; Micro Focus CIS COBOL; Digital Research PL/I MVT/FAMOS with BASIC

OASIS with BASIC

Machine Language interface available on all above systems.

Note: Because HDBS can be integrated with a wide range of languages and operating systems, it provides uniform methods of data handling across those many languages and systems.

HDBS/QRS. An interactive Report-Writer/Query-System with these features:

- complex retrieval conditions may be specified.
- detailed reports can be quickly generated.
- wildcard and "match-one" string specifications included.

HDBS/QRS. This Schema Redesign System permits...

- renaming fields, record types, sets.
- adding new fields to existing record types.
- allocating additional pages to an existing data base.

PRICE:

#### **TITLE: PEARL**

**PUBLISHERS NAME: COMPUTER PATHWAYS UNLIMITED, INC.**

**DESCRIPTION:** Let your business flow into the 1980's.

PEARL generates software tailored to specific business functions

- your software problems will dissolve into solutions overnight. Accounts Payable? General Ledger? Appointment Management? PEARL generates the data fields, the edit routines, the input and output facilities.

PEARL is menu-driven and can be used by non-technicians. A novice can generate software in hours with PEARL - software that it might take a programmer months to write. Save months, or years, development time with PEARL.

PEARL is here now, for your projects. Use your time and energy to define what is needed to create business solutions and let PEARL solve the technical problems.

PEARL - Producing Error-free Automatic Rapid Logic - runs on most CP/M based computing systems.

PRICE: PEARL Level 1	\$ 90	For Personal Computing
PEARL Level 2	\$200	The Business Assistant
PEARL Level 3	\$400	For Software Developers
PEARL Level 4	\$800	For Turnkey System Developers

#### **TITLE: SELECTOR III-C2**

**PUBLISHERS NAME: CPAIDS**

**DESCRIPTION:** Data Base Processor to create and maintain multi-key data bases. Prints formatted sorted reports with numerical summaries or mailing labels. Comes with sample applications, including Sales Activity. Inventory, Payables, Receivables, Check Register, and Client/Patient Appointments, etc. Requires CBASIC-2. Supplied in source.

PRICE: \$295 with manual, \$20 manual alone

#### **TITLE: TIM III**

**PUBLISHERS NAME: INNOVATIVE SOFTWARE**

**DESCRIPTION:** T.I.M. has all of the features one has come to  
CP/M-22

expect from a data management package, as well as many new ones. For example, a word processing interface that allows you to merge information from a T.I.M. file with letters or other documents created by a word processor. Now you can automatically send personalized letters to hundreds or thousands - quickly and easily. T.I.M.'s Select command enables you to pull specific information from a file. For example, "All customers who live in a certain ZIP code, whose last name begins with the letter A to L, whose balance due is less than \$50.00". A sophisticated report generator and even a list generator are also included. How powerful is T.I.M.? With a maximum record size of 2400 characters and the ability to keep up to forty fields sorted properly at all times, T.I.M. is a powerful enough to handle just about any application. T.I.M. can handle over 32,000 records per file, and two files can be linked together for reports if your application requires a many-to-one relationship. T.I.M. also includes all of the same editing commands as your word processor, thus making data entry and editing a snap. You can also pull selected records from one file to place them into another. Files may be restructured to add or subtract fields and/or change field lengths or types. T.I.M. even has it's own utility for backing up hard disks onto floppies.

**PRICE:**

**TITLE: WHATSIT?**

**PUBLISHERS NAME: CPAIDS**

**DESCRIPTION:** Interactive data-base system using associative tags to retrieve information by subject. Hashing and random access used for fast response. Requires CBASIC-2.

**PRICE: \$175 with manual, \$25 manual alone**



## MAIL LISTS

**TITLE: 9 OFFICE PRODUCTIVITY SERIES MAILING LIST MANAGER**  
**PUBLISHERS NAME: PEACHTREE SOFTWARE**

**HARDWARE REQUIREMENTS: 132 column printer, two disk drives**

**DESCRIPTION:** The Series 9 Mailing List Manager by Peachtree Software gives the microcomputer user unprecedented control over the design and application of his mailing lists and mailing labels but it is much more than a mailing list package. In fact, Mailing List Manager has many of the features of a data-base management system.

Mailing List Manager makes use of Peachtree's powerful Visionary screen manager as well as a fast new index file manager developed especially for this package.

**FEATURES:**

- \* User definable format. You decide what information to include on your lists by defining up to 14 items and their lengths, any three of which can be selected as index keys for quick access to specific records. Each index key can be up to 23 characters long and can be composed of numbers or a combination of letters and numbers.  
Each individual record can contain up to 509 characters. The size of all your list files is limited only the the amount of disk space available on your system.
- \* Easy to maintain files. Index keys give you immediate access to individual records that need to be checked or updated. Index keys also allow you to browse through a file in forward or reverse order.  
With Mailing List Manager, new records can be automatically inserted into a list without sorting. You can also set assumed values for new records to speed up first-time entry of a data base. For example, for a number of records with the same city, state and ZIP code, you can preset these items as assumed values for their respective fields.
- \* Make file format changes easily. Since each file maintains its own definition, you can define as many address systems as you need. The definitions can also be altered at any time to suit your purposes. For example, assume you added 1,000 names and addresses but forgot to enter the telephone numbers. You can redefine the format for these records and Mailing List Manager will automatically convert all of your records to take the new definition.
- \* Mix and match. You can easily combine one file from Mailing List Manager with another. For example, you might choose to trade mailing lists with another user. Even if the files have different item definitions, you can give Mailing List Manager instructions about which items in one file correspond to which items in another.
- \* Create mailing with a personal touch. By using PeachText and MailingListManager together, you can generate mass mailings witha personal touch. Using any of the fields you set up for Mailing List Manager in combination with PeachText's variable and conditional commands, you can send variable letters to persons on the same mailing list, depending on the information in the individual record.
- \* Design your own labels. Using Peachtree's Visionary screen manager, our mailing list packagewill show you ascreen representationof a label,on which you position the items you wanttoprint on the actual labels. Then you can run a test label to see if any changes are needed before you run your entire list. It's so easy you don't need a forms ruler.  
Mailing List Manager will support formats of up to five labels across. A total of up to 14 user-definable formats are available.

- \*Easy sorting. Labels can be sorted by any item or by any combination of up to three items (ascending or descending).
- \*Label control. By matching selected characteristics of individual records, Mailing List Manager will include or exclude records from any label group. The total number selected will be given at the end of the run. If the user is unsure of the outcome of a run, he can elect to have the labels brought up on the video screen before printing.
- \*Duplicate labels. Mailing List Manager lets you choose how many labels each address gets - this saves manually doing duplicate labels after the list has been run.
- \*Multiple applications. Mailing List Manager can be used for numerous types of lists, including membership lists, in-house telephone directories and glossaries. A variety of businesses (e.g., employment agencies and medling agencies) have found this package beneficial for managing their mailing lists and labels.

**PRICE: \$375.00**

**TITLE: NAD**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Name and Address selection system. Interactive mail list creation and maintenance program with output as full reports with reference data or restricted information for mail labels. Transfer system for extraction and transfer of selected records to create new files. QSORT required if sorting is desired.

**PRICE: \$100 with manual, \$20 manual alone**

## MEDICAL

### **TITLE: DENTAL MANAGEMENT SYSTEM**

#### **PUBLISHERS NAME: UNIVAIR**

**DESCRIPTION:** This program is very similar to the Medical Management System except that it is programmed to handle the standard ADA Dental Codes and complete most portions of the ADA insurance form.

**PRICE: \$750.00**

### **TITLE: MEDICAL MANAGEMENT SYSTEM**

#### **PUBLISHERS NAME: UNIVAIR**

**DESCRIPTION:** This system is designed for use by a single doctor or small to medium clinic. It maintains detailed records of all patients, office charges, payments, procedures, scheduling, and accounts receivable, both by individual doctor and by clinic. It also handles daily and accumulative ticket and payment registers, detailed, summary, and aged trial balances, patient file inquiry, patient name search, and archiving of inactive patients to a storage disk until needed later. Office charges are set to handle ICDA-9 diagnosis codes and CPT-4 procedures, and provisions are made to allow an office to insert their standard charges for automatic printing of the descriptions and costs on monthly statements and the standard AMA insurance form. The report section provides an analysis of the total number of each of these procedures performed by each doctor and income generated during the current month, so intelligent decisions can be made regarding the most efficient utilization of a physicians office hours. In addition to over 20 different reports, the system automatically prints out the monthly statements to the responsible party (deleting zero-balance accounts), and fills out most portions of the standard AMA, Blue Cross, and Medicare insurance forms. Approximately 3000 fully detailed patient records may be held on one eight-inch double density disk.

**PRICE: \$750.00**

### **TITLE: THE MEDICAL OFFICE MANAGER**

#### **PUBLISHERS NAME: ABT MICROCOMPUTER SOFTWARE**

**HARDWARE REQUIREMENTS:** At least 2 (preferably 4) disk drives, Requirements for Communications System: Hayes Micromodem II or SSM AIO Serial/Parallel Card with acoustic coupler or Apple Communication Card with acoustic coupler.

**DESCRIPTION:** THE MEDICAL OFFICE MANAGER is a collection of medical and dental office software designed to free you from the time-consuming drudgery of filling out forms and processing paperwork.

THE MEDICAL OFFICE MANAGER can generate several practical office management reports, including production analyses, billing status, diagnosis and treatment lists and aged receivable reports (indexed by patient and by insurance company).

If you want information on a specific treatment, drug or disease, you will have access to the MEDLARS data base of the National Library of Medicine - the largest medical information network in the world.

With THE MEDICAL OFFICE MANAGER, you can have access to patient records in your office computer almost as simply as you would check in with your answering service, whether you are making rounds at the hospital, sitting in the comfort of your living room, or attending a distant convention.

The brain of the system is the DATA BASE MANAGEMENT SYSTEM (DBMS) which maintains historical, financial and demographic information for each patient. The DBMS is a full-service medical record



system which links into the General Ledger to maintain accounting information and links into the Management Report Generator to provide you with easy-to-read tabular management reports. Used in conjunction with the PATIENT BILLING SYSTEM, it gives you a complete office billing system with patient histories.

The DBMS is the core software for the use of the following modules, which are available separately or as a package.

#### PATIENT BILLING SYSTEM

This system processes all bills to patients and insurance companies, makes split-assignments, and maintains records of past-due accounts and aged receivables. This module not only prints the bills, it types the envelopes as well. If you wish, service charges can be added for late payments. The insurance report tables, patient recall lists, day sheets and production analysis tables are maintained and printed from within this module.

#### APPOINTMENT SCHEDULING SYSTEM

This module creates routine appointment lists based on the patient history record. Appointments can be made, cancelled, or rescheduled based upon the known availability of the doctor or dentist. Emergency appointments can be entered when they are needed.

#### PAYROLL SYSTEM

Coordinated with the DBMS and General Ledger, this module calculates and types the payroll checks for all office staff. Federal, state and local taxes are automatically taken out and posted to the Ledger, along with all historical information on your employees. Office staff can easily be added or deleted. This module is doctor-reserved, meaning that only an individual with a password which you assign may use this system to alter accounts.

#### OFFICE MANAGEMENT REPORT GENERATOR

This report generating module provides you with a series of easy-to-read tabular management reports.

There are also two MEDICAL OFFICE MANAGER modules which do not require the DBMS for their use.

#### WORD PROCESSING SYSTEM

With the word processor you can type, edit and store manuscripts on disk for future use. It is simple to learn and use, so your staff will be preparing manuscripts for you right away.

#### COMMUNICATIONS SYSTEM

Call up your computer from anywhere in the world. All you need is a phone, a terminal, and an auto-answer modem to access your computer's records with this communications package. This module also gives you access to the National Library of Medicine MEDLARS information system.

PRICE: \$500.00	DBMS and Patient Record System
\$100.00	Patient Billing System
\$ 50.00	Management Report Generator
\$ 50.00	Appointment System
\$ 50.00	Payroll System
\$ 50.00	Word Processing System
\$ 50.00	Communications System
\$700.00	Total MEDICAL OFFICE MANAGER (\$150.00 discount)



## PERIPHERALS

**TITLE: LOADSTAR 8000**

**PUBLISHERS NAME: LOADSTAR TECHNOLOGY CORPORATION**

**DESCRIPTION:** Loadstar Technology Corporation's premier product, the Loadstar 8000, upgrades a single user Z-80 (8 bit) minicomputer with 4-64K of random access memory (RAM) to a single user Z- 8000 (16 bit) minicomputer with 64K RAM (expandable to 8.3 megabytes as well as multiple users). The Loadstar 8000 is a single processor with 2 read only memories (ROM's) capable of storing a total of 8K. The ROM's contain part of the basic and operating systems, 64K RAM, and the necessary circuitry to interface to the host computer. Loadstar 8000 connects to any Z-80 based system such as Apple (with Microsoft card installed). Compared to the Z-80 based system, a host computer installed with Loadstar 8000 has the inherent capability of addressing 128 times more memory. With its expanded instruction set Loadstar 8000 runs 5-20 times faster and will easily support multiple users. The features inherent within th design of the board determine its many applications. With the board installed on a host computer by either a business or home user, the host computer will execute repetitive, operating tasks much faster. It will also perform mathematic calculations and sort data much more quickly. The board's increased random access memory allows the host computer to control more input/output devices such as terminals and printers.

**PRICE:**

## PROGRAMMING AIDS/UTILITIES

**TITLE: ALGOL-60****PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** Powerful block-structured language compiler featuring economical run-time dynamic allocation of memory. Very compact (24K total RAM) system implementing almost all Algol 60 report features plus many powerful extensions including string handling direct disk address I/O etc.

**PRICE: \$199 with manual, \$20 manual alone**

**TITLE: APL/80****PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Concise and powerful language for application software development. Complex programming problems are reduced to simple expressions in APL. Features include up to 27K active workspace, shared variables, arrays of up to 8 dimensions, disk workspace and copy object library. The system also supports auxiliary processors for interfacing I/O ports. Requires 48K CP/M and serial APL printing terminal or CRT.

**PRICE: \$500 with manual, \$30 manual only**

**TITLE: BASIC COMPILER****PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** Language compatible with BASIC-80 and 3-10 times faster execution. Produces standard Microsoft relocatable binary output. Includes MACRO-80. Also linkable to FORTRAN-80 or COBOL-80 code modules.

**PRICE: \$350 with manual, \$25 manual alone**

**TITLE: BASIC UTILITY DISK****PUBLISHERS NAME: EIDOS SYSTEMS**

**DESCRIPTION:** Consists of: (1) CRUNCH-14 - Compacting utility to reduce the size and increase the speed of programs in Microsoft BASIC 4.51 and BASIC-80. (2) DPFUN - Double precision subroutines for computing nineteen transcendental functions including square root, natural log, log base 10, sine, arc sine, hyperbolic sine, hyperbolic arc sine, etc. Furnished in source on diskette and documentation.

**PRICE: \$50 with manual, \$35 manual alone**

**TITLE: BASIC-80****PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** Disk Extended BASIC, ANSI compatible with long variable names, WHILE/WEND, chaining, variable length file records. MBASIC version 4.51 also included on disk.

**PRICE: \$325 with manual, \$25 manual alone**

**TITLE: BDS C COMPILER****PUBLISHERS NAME: DIGITAL RESEARCH**

**DESCRIPTION:** Support structures, unions, 2 dimensional arrays, pointers, recursion and overlays. Features optimized code generator, variable sized buffers for file I/O, and capability to produce ROMable code. Includes macro package to enable user to produce linkable modules with MAC (see under Digital Research). Floating point functions, full run-time package and machine code library sources provided. Linker, library manager and textbook included. Compiler lacks initializers, statics, floats and longs.

**PRICE: \$145 with manual, \$25 manual alone**

**TITLE: BUG and UBUG**

**PUBLISHERS NAME: PHOENIX SOFTWARE**

**DESCRIPTION:** Z-80 interactive machine level debugging tools for program development. BUG has full mnemonic trace and interactive assembly (mnemonics compatible with PASM). Dynamic breakpoints and conditional traps while tracing (even through ROM!). uBUG is a subset of BUG and is used in memory limited situations.

**PRICE: \$129 with manual, \$25 manual alone.**

**TITLE: CBASIC-2**

**PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** Disk Extended BASIC - Non-interactive BASIC with pseudo-code compiler and run-time interpreter. Supports full file control, chaining, integer and extended precision variables, etc. Versions of CRUN for CP/M versions 1.4 and 2.x included in disk.

**PRICE: \$120 with manual, \$15 manual alone**

**TITLE: DEBUG I**

**PUBLISHERS NAME: COMPUTER DESIGN LABS**

**DESCRIPTION:** Many programmers give up on writing in assembly language even though they know their programs would be faster and more powerful. To them assembly language seems difficult to understand and follow, as well as being a nightmare to debug. Well, not with proper tools like Debug I. With Debug I you can easily follow the flow of any Z80 or 8080 program. Trace the program one step at a time or 10 steps or whatever you like. At each step you will be able to see the instruction executed and what it did. If desired, modifications can then be made before continuing. It's all under your control. You can even skip displaying a subroutine call and up to seven breakpoints can be set during execution. Use of Debug I can pay for itself many times over by saving you valuable debugging time. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.

**PRICE: \$79.95/\$20**

**TITLE: DEBUG II**

**PUBLISHERS NAME: COMPUTER DESIGN LABS**

**DESCRIPTION:** This is an expanded debugger which has all of the features of Debug I plus many more. You can "trap" (i.e. trace a program until a set of register, flag, and/or memory conditions occur). Also, instructions may be entered and executed immediately. This makes it easy to learn new instructions by examining registers/memory before and after. And a RADIX function allows changing between ASCII, binary, decimal, hex, octal, signed decimal, or split octal. All these features and more add up to give you a very powerful development tool. Both Debug I and II must run on a Z80 but will debug both Z80 and 8080 code. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.

**PRICE: \$99.95/\$20**

**TITLE: DESPOOL**

**PUBLISHERS NAME: DIGITAL RESEARCH**

**DESCRIPTION:** Utility program to permit simultaneous printing from text files while executing other programs.

**CP/M-30**

**PRICE: \$80 with manual, \$10 manual alone**

**TITLE: EDIT**

**PUBLISHERS NAME: PHOENIX SOFTWARE**

**DESCRIPTION:** Character oriented text file editor. Includes macro definition capabilities. Handles insertion, deletion, searching, block move, etc. for files of any length.

Does not require a CRT.

**PRICE: \$129 with manual, \$25 manual alone**

**TITLE: EDIT-80**

**PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** Very fast random access text editor for text with or without line numbers. Global and intro-line commands supported. File compare utility included.

**PRICE: \$89 with manual, \$15 manual alone**

**TITLE: FORMS 2**

**PUBLISHERS NAME: MICRO FOCUS**

**DESCRIPTION:** CRT screen editor. Output is COBOL data descriptions for copying into CIS COBOL programs. Automatically creates a query and update program of indexed files using CRT protected and unprotected screen formats. No programming experience needed. Output program directly compiled by STANDARD CIS COBOL.

**PRICE: \$200 with manual, \$20 manual alone**

**TITLE: KBASIC**

**PUBLISHERS NAME: EIDOS SYSTEMS**

**DESCRIPTION:** Microsoft Disk Extended BASIC version 4.51 integrated with KISS Multi-Keyed Index Sequential and Direct Access file management as 9 additional BASIC commands. KISS included as relocatable modules linkable to FORTRAN-80, COBOL-80, and BASIC COMPILER. Specify CP/M version 1.4 or 2.x when ordering. Requires 48K CP/M.

**PRICE: \$585 with manual, \$45 manual alone**

**To licensed users of Microsoft BASIC-80 (MBASIC)**

**Otherwise: \$435 with manual, \$45 manual alone**

**TITLE: LINKER**

**PUBLISHERS NAME: COMPUTER DESIGN LABS**

**DESCRIPTION:** How many times have you written the same subroutine in each new program? Top notch professional programmers compile a library of these subroutines and use a Linker to tie them together at assembly time. Development time is thus drastically reduced and becomes comparable to writing in a high level language but with all the speed of assembly language. So, get the new CDL Linker and start writing programs in a fraction of the time it took before. Linker is compatible with Macro I & II as well as TDL/Xitan assemblers version 2.0 or later. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.

**PRICE: \$79.95/\$20**

**TITLE: M/SORT**

**PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** Optional sort/merge capability for COBOL-80 which conforms fully to SORT/MERGE, Level II of the 1974 ANSI COBOL



standard (except COLLATING SEQUENCE IS alphabet-name).

**PRICE:** \$150 with manual, \$10 manual alone, sold as an update to COBOL-80.

\$825 with manual, \$35 manual alone, COBOL-80 plus M/SORT

**TITLE: MAC**

**PUBLISHERS NAME: DIGITAL RESEARCH**

**DESCRIPTION:** 8080 Macro assembler. Full Intel macro definitions. Pseudo Ops include RPC, IRP, REPT, TITLE, PAGE, and MACLIB. Produces absolute hex output plus symbol table file for use by SID and ZSID (see below).

**PRICE:** \$120 with manual, \$15 manual alone

**TITLE: MACRO II**

**PUBLISHERS NAME: COMPUTER DESIGN LABS**

**DESCRIPTION:** Expands upon Macro I's linking capability (which is useful but somewhat limited) thereby being able to take full advantage of the optional Linker. Also a time and date function has been added and the listing capability improved. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.

**PRICE:** \$99.95/\$25

**TITLE: MACRO-80**

**PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** 8080/Z80 Macro Assembler, Intel and Zilog mnemonics supported. Relocatable linkable output. Loader, Library Manager and Cross Reference List utilities included.

**PRICE:** \$149 with manual, \$15 manual alone

**TITLE: MAGSAM III**

**PUBLISHERS NAME: CPAIDS**

**DESCRIPTION:** Sophisticated keyed access file support system. Supports random, sequential, and generic retrieval by key. Also, multiple secondary keys. Dynamic allocation and extension of files with automatic free space reclamation, interactive tutorial included to get the user started. Complete with documentation and quick reference card. Specify CBASIC or Microsoft BASIC version. Requires 48K system.

**PRICE:** \$145 with manual, \$25 manual alone

**TITLE: MAGSAM IV**

**PUBLISHERS NAME: CPAIDS**

**DESCRIPTION:** High speed machine code version of MAGSAM III for CBASIC only. Distributed as pre-loaded modules and Microsoft relocatable object modules.

**PRICE:** \$295 with manual, \$25 manual alone

**TITLE: MULISP-80**

**PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** Microcomputer implementation of LISP. The interpreter resides in only 7K bytes of memory yet includes 83 LISP functions. Has infinite precision integer arithmetic expressed in any radix from 2 to 36. muLISP80 includes complete trace facility and a library of useful functions and entertaining sample programs.

**PRICE:** \$200 with manual, \$15 manual alone

**TITLE: MUSIMP/MUMATH****PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** muSIMP is a high level programming language suitable for symbolic and semi-numerical processing implemented using a fast and efficient interpreter requiring only 7K bytes of machine code. muMATH is a package of programs written in muSIMP. The package performs sophisticated mathematical functions. Keeps track of up to 611 digits. Performs matrix operations on arrays: transpose, multiply, divide, inverse and other integer powers. Logarithmic, exponential, trigonometric simplification and transformation, symbolic differentiation with partial derivatives, symbolic integration of definite and indefinite integrals.

**PRICE: \$250 with manual, \$20 manual alone**

**TITLE: NEVADA COBOL****PUBLISHERS NAME: MICRO FOCUS**

**DESCRIPTION:** Subset of ANSI-74. Features fast compilation and execution with small object modules. Has extended arithmetic with 18 digit accuracy. Extended I/O includes random access files and sequential files of both fixed and variable length records, and interactive accept/display verbs. Good error messages and debugging facilities enhance program development. Requires a 32K CP/M system.

**PRICE: \$149 with manual, \$25 manual alone**

**TITLE: PASCAL/M****PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** Compiles enhanced Standard Pascal to compressed efficient Pcode. Totally CP/M compatible. Random access files. Both 16 and 32-bit Integers. Runtime error recovery. Convenient STRINGS. OTHERWISE clause on CASE. Comprehensive manual (90 pp. indexed). SEGMENT provides overlay structure. IMPORT, OUTPORT and untyped files for arbitrary I/O.

**PRICE: \$175 with manual, \$20 manual alone**

**TITLE: PASCAL/MT****PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** Subset of standard PASCAL Generates ROMable 8080 machine code. Symbolic debugger included. Supports interrupt procedures. CP/M file I/O and assembly language interface. Real variables can be BCD, software floating point, or AMD 9511 hardware floating point. Includes strings enumerations and record data types. Manual explains BASIC-PASCAL conversion. Requires 32K.

**PRICE: \$250 with manual, \$30 manual alone**

**TITLE: PASCAL/Z****PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS****HARDWARE REQUIREMENTS: 16K expansion card**

**DESCRIPTION:** Z80 native code PASCAL compiler. Produces optimized, ROMable re-entrant code. All interfacing to CP/M is through the support library. The package includes compiler, relocating assembler and linker, and source for all library modules. Variant records, strings and direct I/O are supported.

**PRICE: \$395 with manual, \$25 manual alone**

**TITLE: PASM**

**PUBLISHERS NAME: PHOENIX SOFTWARE**

**DESCRIPTION:** Z80 macro assembler, Intel/TDL mnemonics. Generates Intel hex format or relocatable code in either TDL Object Module format or PSA Relocatable Binary Module format. Supports text insertion, conditional branching within macros, recursive macro calls and parameter passing.

**PRICE: \$129 with manual, \$25 manual alone**

**TITLE: PLINK**

**PUBLISHERS NAME: PHOENIX SOFTWARE**

**DESCRIPTION:** Two pass disk-to-disk linkage editor/loader which can produce re-entrant, ROMable code. Can link programs that are larger than available memory for execution targeted on another machine. Full library capabilities. Input can be PSA Relocatable Binary Module, TDL Object Module or Microsoft REL files. Output can be a COM file, Intel hex file, TDL Object Module or PSA Relocatable file.

**PRICE: \$129 with manual, \$25 manual alone**

**TITLE: QSORT**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Fast sort/merge program for files with fixed record length, variable field length information. Up to five ascending or descending keys. Full back-up of input files created.

**PRICE: \$100 with manual, \$20 manual alone**

**TITLE: RECLAIM**

**PUBLISHERS NAME: EIDOS SYSTEMS**

**DESCRIPTION:** A utility to validate media under CP/M. Program tests a diskette or hard disk surface for errors, reserving the imperfections in invisible files, and permitting continued usage of the remainder. Essential for any hard disk. Requires CP/M version 2.

**PRICE: \$80 with manual, \$5 manual alone**

**TITLE: SID**

**PUBLISHERS NAME: DIGITAL RESEARCH**

**DESCRIPTION:** 8080 Symbolic debugger. Full trace, pass count and breakpoint program testing. Has backtrace and histogram utilities. When used with MAC, provides full symbolic display of memory labels and equated values.

**PRICE: \$105 with manual, \$15 manual alone**

**TITLE: STANDARD CIS COBOL**

**PUBLISHERS NAME: MICRO FOCUS**

**DESCRIPTION:** ANSI 74 COBOL standard compiler fully validated by U.S. Navy tests to ANSI level 1. Supports many features to level 2 including dynamic loading of COBOL modules and a full ISAM file facility. Also, program segmentation, interactive debug and powerful interactive extensions to support protected and unprotected CRT screen formatting from COBOL programs used with any dumb terminal.

**PRICE: \$850 with manual, \$50 manual alone**

**TITLE: TEX**

**PUBLISHERS NAME: DIGITAL RESEARCH**

**DESCRIPTION:** Text output formatter to create paginated, page-numbered and justified copy. Output can be directed to printer or



disk.

**PRICE: \$105 with manual, \$15 manual alone**

**TITLE: THE STRING BIT**

**PUBLISHERS NAME: EIDOS SYSTEMS**

**DESCRIPTION:** FORTRAN character string handling. Routines to find, fill, pack, move, separate, concatenate and compare character strings. This package completely eliminates the problems associated with character string handling in FORTRAN. Supplied with source.

**PRICE: \$65 with manual, \$15 manual alone**

**TITLE: TINY C**

**PUBLISHERS NAME: DIGITAL RESEARCH**

**DESCRIPTION:** Interactive interpretive system for teaching structured programming techniques. Manual includes full source listings.

**PRICE: \$105 with manual, \$50 manual alone**

**TITLE: TOP**

**PUBLISHERS NAME: COMPUTER DESIGN LABS**

**DESCRIPTION:** A Z80 Text Output Processor which will do text formatting for manuals, documents, and other word processing jobs. Works with any text editor. Does justification, page numbering and headings, spacing, centering, and much more! Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.

**PRICE: \$79.95/\$25**

**TITLE: VSORT**

**PUBLISHERS NAME: EIDOS SYSTEMS**

**DESCRIPTION:** Versatile sort/merge system for fixed length records with fixed or variable length fields. VSORT can be used as a stand-alone package or loaded and called as a subroutine from CBASIC-2. When used as a subroutine, VSORT maximizes the use of buffer space by saving the TPA on disk and restoring it on completion of sorting. Records may be up to 255 bytes long with a maximum of 5 fields. Upper/lower case translation and numeric fields supported.

**PRICE: \$175 with manual, \$20 manual alone**

**TITLE: XMACRO-86**

**PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** 8086 cross assembler. All Macro and utility features of MACRO-80 package. Mnemonics slightly modified from Intel ASM86. Compatibility data sheet available.

**PRICE: \$275 with manual, \$25 manual alone**

**TITLE: XYBASIC**

**PUBLISHERS NAME: EIDOS SYSTEMS**

**DESCRIPTION:** Interactive Process Control BASIC - Full disk BASIC features plus unique commands to handle byte rotate and shift and to test and set bits. Available in several versions:

Integer ROM squared - \$350 with manual, \$25 manual alone

Integer CP/M - \$350 with manual, \$25 manual alone

Extended ROM squared - \$450 with manual, \$25 manual alone

Extended CP/M - \$450 with manual, \$25 manual alone

Extended Disk CP/M - \$550 with manual, \$25 manual alone

**CP/M-35**



Integer CP/M Run Time Compiler - \$350 with manual, \$25 manual alone

Extended CP/M Run Time Compiler - \$450 with manual, \$25 manual alone

**PRICE:**

**TITLE: ZAPPLE**

**PUBLISHERS NAME: COMPUTER DESIGN LABS**

**DESCRIPTION:** A Z80 executive and debug monitor. Capable of search, ASCII put and display, read and write to I/O ports, hex math, breakpoint, execute, move, fill, display, read and write in Intel or binary format tape, and more! on disk. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.

**PRICE:**

**TITLE: ZEDIT**

**PUBLISHERS NAME: COMPUTER DESIGN LABS**

**DESCRIPTION:** A character oriented text editor with 26 commands and "macro" capability for stringing multiple commands together. Included are a complete array of character move, add, delete, and display function. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.

**PRICE: \$49.95/\$15**

**TITLE: ZSID**

**PUBLISHERS NAME: DIGITAL RESEARCH**

**DESCRIPTION:** Z80 Symbolic debugger with all features of SID.

**PRICE: \$130 with manual, \$15 manual alone**

**TITLE: ZTEL**

**PUBLISHERS NAME: COMPUTER DESIGN LABS**

**DESCRIPTION:** Z80 Text Editing Language - Not just a text editor. Actually a language which allows you to edit text and also write, save, and recall programs which manipulate text. Commands include conditional branching, subroutine calls, iteration, block move, expression evaluation, and much more. Contains 36 value registers and 10 text registers. Be creative! Manipulate text with commands you write using Ztel. Available for operation with Z80 CPU using the CP/M or similar type disk operating system.

**PRICE: \$79.95/\$25**

## WORD PROCESSING

**TITLE: 9 OFFICE PRODUCTIVITY SERIES PEACHTEXT WORD PROCESSOR**

**PUBLISHERS NAME: PEACHTREE SOFTWARE**

**HARDWARE REQUIREMENTS: 132 column printer, two disk drives**

**DESCRIPTION:** As the cornerstone of Peachtree Software's Peachpak 9 Office Productivity Series, the PeachText Word Processor offers microcomputer users the flexibility and control crucial to efficient word processing.

PeachText can help you design, write and revise an endless variety of written communications without the time-consuming tasks of recomposing and retyping. Even if you have no prior experience with word processing, PeachText will guide you simply and quickly through its applications.

The program selections are presented in a menu format that almost completely insulates the user from the CP/M operating system. Built-in HELP screens make using the programs easy even for the novice.

Like all Peachtree packages, PeachText comes complete with a carefully detailed user's manual, designed to teach you all the features of word processing with PeachText. Plenty of examples and exercises are included to make learning fast.

### **EDITING FEATURES:**

PeachText streamlines the writing and editing process on all types of documents. Your terminal uses control keys to tell PeachText what to do. For example with a few strokes on the keyboard, words, characters, lines or paragraphs can be inserted, deleted, or modified.

While editing or writing at the terminal, a cursor will show you your location in the text of the document.

This cursor is under the complete control of the user. A simple command will send the cursor back to the beginning of a line for editing, or the beginning or end of the entire document. Single-stroke control keys can also be used to move the cursor quickly to the top or bottom of the text.

Correcting typographical errors and misspellings is an easy task with PeachText. Characters can often be replaced by simply "typing" over them.

More complex text changes can be handled with one of the following PeachText features:

- \* **Deletions.** Characters, words, lines or blocks of copy may be deleted in a single command with PeachText. To prevent accidental deletions, automatic checks are built into the line delete and block delete commands.
- \* **Insertions.** Text can be inserted two ways with PeachText - a character at a time or in blocks of copy. Character insert updates the screen after each new character is added. Full insert clears the screen to allow you to insert as much text as you wish. For convenience, the last previous line of text and the following line are left on the screen during full insert.
- \* **Block manipulations.** Blocks of text can be deleted, moved to a different place or copied to a different place or within a document using PeachText commands.
- \* **Search functions.** If you need to change the same word throughout a document, the search function allows you to locate that word and replace it with another. For example, if you misspelled a person's name throughout a contract, PeachText could be used to locate that misspelling and correct it each time it appeared in the document. The search and replace function operates by consecutively locating identified strings of characters. This feature gives you the flexibility of modifying those characters in as many places as you wish within a document.
- \* **Multi-document access and interdocument communication.** With

PeachText, you can edit and manipulate two documents at the same time. Since you have access to both documents simultaneously, you can choose sections from one document to be included in another or combine the documents. The results of these maneuvers can then be printed directly.

#### PRINTING FEATURES:

PeachText allows several options for arranging and printing documents. PeachText will set your copy flush left, flush right or justified. And it will justify it two ways: by spacing between words or by spreading the characters.

In printing as in editing, PeachText is always under the total control of the user. Printing commands may be given when it is time to print a document, or they may be embedded in the text of the document.

Printing commands allow you to set margins, page length, indentation, text alignment, paragraph indentation, hyphenation and line spacing for your document.

Before printing, a document can be displayed on the terminal screen in the exact format in which it will be printed. This allows any last-minute changes to be made so your printed material will appear exactly as you wish.

PeachText also includes the following features:

- \* **Underscoring.** PeachText allows two types of underscoring - solid or broken. Solid underscoring places a solid line under an entire passage. Broken underscoring underlines only the individual characters indicated.
- \* **Boldface.** PeachText gives you boldface copy by using character overstrikes. Variable degrees of boldness are possible depending on the number of overstrikes.
- \* **Subscripts and superscripts.**
- \* **Variable pitch control.** PeachText can adjust the number of characters printed per inch to a number other than the standard 10 or 12.
- \* **Headers and footers.** With PeachText, headers and footers are defined by the user and inserted automatically when the text file is printed.
- \* **Override.** You can stop the printer and change commands at run time without aborting the program.
- \* **Spool printing.** With PeachText, you can print a file while editing another.

#### ADDITIONAL FEATURES:

PeachText is reasonably priced, yet contains features normally found only in high-priced word processing systems.

- \* **Variables.** You may define as many as 128 variables of up to 55 characters each that can be used to individualize form letters and to construct documents individualize form letters and to construct documents using parts or paragraphs from other documents.
  - \* **Merging with external data files.** This feature, compatible with both sequential and fixed-record files, allows you to set up data files to be used as variables to be fed into form letters or similar documents.
  - \* **Sophisticated file handling.** PeachText saves the originals of files that are edited as a backup. You can save the edited text under a different name or on a different disk, in which case the original file remains unchanged. Or you can quit editing at any time without saving the edited file, thus leaving the original and its backup, if any, intact.
  - \* **Comprehensive user's manual.** PeachText comes with an acclaimed user's manual that takes the trainee through a complete instructional program on PeachText's features. The manual is written in clear, non-technical English and provides numerous exercises for the student.
- The manual contains complete documentation of the command



structure, special notes for programmers, an introduction of the CP/M operating system for nonprogrammers and a glossary.  
**PRICE: \$500.00**

**TITLE: 9 OFFICE PRODUCTIVITY SERIES SPELLING PROOFREADER**

**PUBLISHERS NAME: PEACHTREE SOFTWARE**

**HARDWARE REQUIREMENTS: 132 column printer, two disk drives**

**DESCRIPTION:** The Series 9 Spelling Proofreader by Peachtree Software is a high-performance software package that finds spelling mistakes and typographical errors in documents prepared by users of Peachtree's PeachText or other microcomputer word processors and text editors.

**FEATURES:**

- \* **Speed.** Spelling Proofreader is fast. A typical floppy diskette system using double-density diskettes can check a 20-page document (about 10,000 words) in less than a minute. Systems using single-density diskettes could check the same document in about two minutes.
- \* **Size.** Spelling Proofreader comes to the user with a 20,000-word standard usage dictionary. But you can add any number of words to that - limited only by the disk storage capacity of your system.
- \* **Versatility.** Spelling Proofreader makes it easy for you to create your own dictionaries for special needs, such as law, science, medicine, engineering, insurance, or data processing. You can choose the dictionary you want to proofread a document, depending on the subject matter. You can even combine dictionaries.
- \* **Ease of use.** Spelling Proofreader combines menu-driven displays, a self-instruction manual and HELP displays to make the package easy to use for the novice.
- \* **Accuracy.** Spelling Proofreader handles difficult word situations with ease. For example, it takes into consideration hyphenated words, hyphens at the end of lines, "ghost" hyphens and apostrophes.

**HOW DOES SPELLING PROOFREADER WORK?**

Using the menu, you select the option "Spell Check Document." Then you enter the name of the document to be checked. Spelling Proofreader checks it, supplying you with figures on the number of words read, the number of unique words, the percent of unique words, the number of words that do not match the dictionary, the percent of words that mismatch and the percent of proofing completed. The numbers change as Spelling Proofreader proceeds, and then it notifies you when spell checking is complete.

The next step is the "Individual Word Review." This program gives you the mismatched words one by one, with the option on each to add it to the dictionary, mark it as incorrect, skip it, back up to the previous word, list remaining words, get HELP instructions or transfer to "Group Word Review." Group Word Review allows you to add, mark or skip all of the remaining mismatched words in the document.

After spell checking, you can use PeachText to search for Spelling Proofreader's marking symbol in the checked document to find and correct misspelled words.

For example, "compraison" would be marked as "compraiso[," if a [ was being used as the marking symbol. PeachText would search for the [ within the document. The word could then be changed to "comparison" using PeachText's editing commands.

In the "Maintain Dictionary" option on Spelling Proofreader menu, the user can list the words in a dictionary on the video screen or on the printer, combine two dictionaries, subtract one dictionary from another or delete words from a dictionary.

Spelling Proofreader gives the user three default tables. One is



designated as standard and is supplied with Spelling Proofreader. The user can set up the other two to fit his won needs. The package also comes with lists of present instructions to tell Spelling Proofreader such things as which dictionary to use to proof a document, the special character to use to mark incorrect words, whether to make a backup copy of the document, etc.

**PRICE: \$300.00**

**TITLE: LETTERIGHT**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Program to create, edit and type letters or other documents. Has facilities to enter, display, delete and move text, with good video screen presentation. Integrates with NAD for form letter mailings.

**PRICE: \$200 with manual, \$25 manual alone**

**TITLE: MAGIC WAND**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Word processing system with simple, easy to use full screen text editor and powerful print processor. Editor has all standard editing functions including text insert and delete, global search and replace, block move and library files for boiler plate text. Print processor formatting commands include automatic margins, pagination, headings & footings, centered and justified text. Also prints with true proportional spacing, merges with data files for automatic form letters, and performs run-time conditional testing for varied output. Requires 32K CP/M and CRT terminal with addressable cursor.

**PRICE: \$395 with manual, \$40 manual alone**

**TITLE: MOONSHADOW TEXT FORMATTER/FOR UCSD PASCAL (TM)**

**PUBLISHERS NAME: MERRIMACK SYSTEMS**

**DESCRIPTION:** The UCSD Pascal (TM) system contains a screen-oriented text editor which is convenient, but which is not suited to word processing. It cannot underline, paginate automatically, or perform other essential text-processing functions. The MOONSHADOW TEXT FORMATTER (MTF) from Merrimack Systems solves this problem.

With the MOONSHADOW TEXT FORMATTER, documents produced with the screen editor are post-processed to provide these missing functions. It takes standard Pascal text files, operates on them, and sends fully formatted text out-put to the console display, a printer, or a disk file.

MOONSHADOW TEXT FORMATTER provides, in addition to a full range of formatting functions, advanced features including the combination of files into one document, variables in text (for form letters), and output character translation.

The MOONSHADOW TEXT FORMATTER is written in UCSD Pascal (TM), and is available for Apple II.

**PRICE: \$125.00**

**TITLE: SPELLGUARD**

**PUBLISHERS NAME: INNOVATIVE SOFTWARE**

**DESCRIPTION:** A revolutionary new computer program that finds spelling mistakes and typographical errors in documents prepared with CP/M compatible word processors and text editors.

In less than one minute, SPELLGUARD proofreads 20 pages of text (10,000 words) and identifies all misspelled or mis-typed words based on its 20,000 word dictionary. After proofreading SPELLGUARD asks the operator to review words identified as

structure, special notes for programmers, an introduction of the CP/M operating system for nonprogrammers and a glossary.  
**PRICE: \$500.00**

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MOONSHADOW TEXT FORMATTER provides, in addition to a full range of formatting functions, advanced features including the combination of files into one document, variables in text (for form letters), and output character translation.

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**PRICE: \$125.00**

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In less than one minute, SPELLGUARD proofreads 20 pages of text (10,000 words) and identifies all misspelled or mis-typed words based on its 20,000 word dictionary. After proofreading SPELLGUARD asks the operator to review words identified as



potential errors and judge each as correct or incorrect. Correct words may be added to the dictionary. SPELLGUARD marks incorrect words in the text so the operator can use a word processor or text editor to easily find and correct them.

**SPELLGUARD is Easy to Use**

- full proofreading capabilities are mastered after a few minutes of instruction.

- comprehensive user's manual contains step-by-step examples of all SPELLGUARD features.

**SPELLGUARD is Powerful**

- text files to 85 pages (CP/M 1.4), and 2,800 pages (CP/M 2.0).

- includes a 20,000 word, expandable dictionary.

- contains powerful commands to construct customized dictionaries for special areas, e.g., medicine, real estate, law, insurance, engineering.

**SPELLGUARD is Reliable**

- thoroughly tested in actual use.

- 30-day money-back guarantee.

**Minimum System Requirements:** 8080/85, Z80 CPU with 32K memory: CP/M 1.4 (dictionaries to 256 K bytes) or CP/M 2.0 or later (dictionaries to 8 MB); 8" floppy drive (single density, CP/M and Shugart compatible;; word processor or text editor compatible with SPELLGUARD (currently WordStar, Wordmaster, Magic Wand, Electric Pencil, and ED).

The price of SPELLGUARD includes rapid turnaround and delivery by UPS blue label or airmail. Sales will be made only if the purchasers' word processor is compatible with SPELLGUARD. Software license agreement is required.

**PRICE:**

#### **TITLE: TEXTWRITER III**

**PUBLISHERS NAME: ORGANIC SOFTWARE**

**DESCRIPTION:** ORGANIC SOFTWARE'S TEXTWRITER III is a powerful text formatting program that is the ideal enhancement to most word processing systems such as WORDMASTER, ELECTRIC PENCIL, and WORDSTAR. It provides you with the ability to print personalized form letters, reports and manuals, contracts and specifications, books and articles.

**PERSONALIZED FORM LETTERS** - Prints one copy of letter for each name on list while automatically inserting names and addresses. Can use account numbers, account balances, etc., instead of names and addresses.

**REPORTS & MANUALS** - Automatically creates a table of contents, an alphabetized index, and prints all footnotes. No need to manually change the contents or index everytime a small change is made.

**CONTRACTS & SPECIFICATIONS** - Frequently used paragraphs or phrases are stored in files and automatically inserted by name as the document is printed.

**BOOKS & ARTICLES** - Footnotes collected and printed at bottom of page. Optional chapter and page numbers. Chapters can be kept in separate files for easy editing and linked together when printed.

Available for CP/M

**PRICE:**

#### **TITLE: WORD-MASTER**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Text Editor - In one mode has superset of CP/M's ED commands including global searching and replacing, forwards and backwards in file in video mode, provides full screen editor for users with serial addressable-cursor terminal.

**PRICE:** \$145 with manual, \$25 manual alone

CP/M-41



**TITLE: WORD-STAR**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** Menu driven visual word processing system for use with standard terminals. Text formatting performed on screen, facilities for text paginate, page number, justify, center and underscore. User can print one document while simultaneously editing a second. Edit facilities include global search and replace. Read/Write to other text files, block move, etc. Requires CRT terminal with addressable cursor positioning.

**PRICE: \$445 with manual, \$40 manual alone**

**TITLE: WORD-STAR-MAIL-MERGE**

**PUBLISHERS NAME: LIFEBOAT ASSOCIATES**

**DESCRIPTION:** As above with option for production mailing of personalized documents with mail lists from DATASTAR or NAD.

**PRICE: \$575 with manual, \$40 manual alone**

## **DATA BASE**

Data Base Programs have many applications from Business to Personal, you can file, sort, shuffle and generate reports at your command. Data Base Programs allow you to organize material tailored to your specific needs and requirements. Some data base programs will even write programs to your specifications.

# DATA BASE

ACCESS . . . . .	DB-1
ADVANCED DATA HANDLER . . . . .	DB-2
APPLE LITERATURE DATABASE . . . . .	DB-2
APPLE RECORD MANAGER . . . . .	DB-2
CCA DATA MANAGEMENT SYSTEM . . . . .	DB-2
DATA BASE MANAGEMENT . . . . .	DB-3
DATA BASE MANAGEMENT SYSTEM . . . . .	DB-3
DATA FACTORY . . . . .	DB-4
DATA PERFECT . . . . .	DP-5
DATA-HANDLER . . . . .	DB-5
DATADIX . . . . .	DP-5
DATAFAX . . . . .	DB-6
DATKEYPER . . . . .	DB-6
DB MASTER - UTILITY PAK #1 . . . . .	DB-7
DB MASTER - UTILITY PAK #2 . . . . .	DP-7
DB MASTER REVISION THREE . . . . .	DB-8
DB MASTER . . . . .	DB-10
DISK LIBRARY . . . . .	DB-11
FILE CREATOR/RETRIEVER . . . . .	DP-11
FILE WHIZ (INFORMATIVE MANAGEMENT SYSTEM) . . . . .	DB-12
FILEMASTER . . . . .	DB-12
FORMULEX . . . . .	DB-13
IFC-DATA BASE MANAGER PROGRAM (VERSION I) . . . . .	DB-14
INFORMATION MASTER . . . . .	DB-14
INFOTREE . . . . .	DB-15
ISAM-DS . . . . .	DB-15
MICRO INFORMATION SYSTEM . . . . .	DB-16
MUSEUM COLLECTOR CATALOG . . . . .	DB-16
PASCAL DATABASE . . . . .	DB-16
PEGASUS: RELEASE 2 . . . . .	DB-17
PFS (PERSONAL FILING SYSTEM) . . . . .	DB-17
QUICK & EASY DATA MASTER . . . . .	DB-17
RECORD LIBRARY . . . . .	DB-18
REQUEST . . . . .	DB-18
SCIENTIST . . . . .	DB-19
STATPRO . . . . .	DB-19
THE AUDIOVISUAL CATALOGING SYSTEM . . . . .	DB-20
THE DATA REPORTER . . . . .	DB-20
THE MICROCONDUCTOR (TM) . . . . .	DB-20
THE MINI FACTORY . . . . .	DB-21
TRANSACTOR . . . . .	DB-21
VERSAFORM . . . . .	DB-21
VISIDEX . . . . .	DB-23
VISIFILE . . . . .	DB-24
Z65 DATA BASE PROCESSOR . . . . .	DB-25

**TITLE: ACCESS****PUBLISHERS NAME: SPIDER SOFTWARE****DESCRIPTION:****1. DATA FIELD TYPES:**

- \* Numeric
- \* Alpha characters A to Z and special characters
- \* Alphanumeric fields combining the above field types
- \* Calculated fields

**2. STORAGE METHOD & RETRIEVAL TIMES:**

ACCESS uses a powerful IRAM (Indexed Random Access Method) filing system. Records are stored in entry order. The index consists of the first characters of a specified field of each record (the number of characters used is dependent on the record size). Any record can be retrieved in less than 3 seconds if requested by it's index. Indexes may be created from any field (and stored for later use). Up to 8 indexes may be stored on each utility disk. Any record on a diskette can be retrieved in less than 23 seconds using various criteria such as OR, AND, Wild Card, global or range searches on a field or number of fields.

**3. CAPACITY:**

- \* Up to 1521 characters per record
- \* Up to 39 fields per record
- \* Up to 39 characters per field
- \* Up to 20 calculated fields per record (calculated fields are not stored on disk)
- \* Up to 39 screen pages per record
- \* Maximum of 2800 records per diskette (depending on the size of the records)
- \* Up to 8 screen forms may be saved on each utility disk (includes short forms which display only a portion of the record for rapid update/validation)
- \* Up to 8 defined report formats may be saved on each utility disk

**4. SPECIAL FEATURES**

- \* Title only fields (do not take up valuable data space)
- \* Word processor style editor (delete/insert characters etc.)
- \* Hidden fields
- \* Simple command structure- commands may be stacked for fast update and retrieval
- \* Free format screen design- very easy to use
- \* Report generator allows additional calculated results, headings, column subtotals, totals etc.
- \* Logging of updated records
- \* Automatic or manual update of records
- \* Sorts may be merged
- \* A copy program is provided to enable back-up copies of the program, data and utility disks to be made
- \* Standard DOS 3.3 text files may be produced in either sequential or random access format using any sorted or selected fields
- \* Deleted records may be un-deleted or purged from the database
- \* 7 second boot-up to program

**5. SYSTEM REQUIREMENTS**

- (1) Apple II+ 48K
- (2) 1 or 2 disk drives (2 recommended)
- (3) Dos 3.3 Disk Operating System
- (4) ACCESS supports most makes of printers (special control characters may be sent to the printer as required)
- (5) ACCESS will support most 40 or 80 column upper and lower case hardware modifications
- (6) Versions of ACCESS will be available to support the SyMBfile 5 megabyte Winchester drive and the SyMBstore 8 megabyte 5.25 inch floppy system



**PRICE: \$199.95**

**TITLE: ADVANCED DATA HANDLER**

**PUBLISHERS NAME: BUSINESS COMPUTER SERVICES CO.**

**DESCRIPTION:** This data base system contains all the capabilities of the Data Handler software package along with enhancements and three additional programs. SEARCH program allows scanning of data files for particular records. LABEL program provides label-making capabilities from record data. ADD program will allow addition and subtraction of numerical fields within data records in a file. The maximum number size is 16.8 digits.

**PRICE: \$20.00**

**TITLE: APPLE LITERATURE DATABASE**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** Now you are capable of searching through five years of accumulated Apple literature references. All you have to do is insert a disk and enter the required search word at the keyboard. The Apple scans the disk (over sixty publications) for all references containing the search word. Apple then displays the finds on screen or if available, writes them to a printer.

**PRICE: \$60.00**

**TITLE: APPLE RECORD MANAGER**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** Allows complete files to be brought into memory so that record searches and manipulations are instantaneous. Records within any file can contain up to 20 fields, with user-defined headings. Information can be string or numeric. User's can browse thru files using page-forward, page-backward or random-search commands. Records can easily be searched, altered or sorted at will. Files can be stored on the same drive as the master program, or on another, if a second drive is available. Records of files can be printed, if desired. Additional modules coming are a STATISTICS INTERFACF, CHECKBOOK, MAILING LIST & DATA ENTRY.

**PRICE: \$35.00**

**TITLE: CCA DATA MANAGEMENT SYSTEM**

**PUBLISHERS NAME: VISICORP**

**DESCRIPTION:** The CCA Data Management System makes it easy to organize and manage the information your business grows on. Mailing lists, customer files, inventory, client billing, reports and mailing labels - every business handles this type of day-to-day information. CCA Data Management System handles it better. You save time, save money, get a better grasp of your operation. Mounds of paper records are replaced by a few diskettes. Card files become obsolete. Lists and labels are ready for you with computer-age speed.

The CCA Data Management System puts you in control of your information. It's designed to be flexible, so you can decide the exact information you want to handle, how you want it handled, and how you want it presented.

Your records are complete. Each record in a CCA Data Management System file can hold up to 24 pieces of information. This means that you can have NAME, ADDRESS, CITY, STATE and ZIP and still have room for 19 other details in that record. Each record holds 232 characters - numbers or letters.

Your CCA Data Management System can sort your information too.

Alphabetic or numeric, in ascending or descending order - and by

ten criteria at a time! Sort lists of names by a number or letter range. Sort parts by number or description. Sort clients by address or billing. And CCA will take care of many simple mathematical chores, such as figuring a billing by multiplying rate per hour by number of hours. If you specify it, CCA will enter that figure in your records - automatically. When printing a report, CCA can total down columns and print subtotals. CCA Data Management System is flexible in the way you receive your information, too. On the computer display screen, for a quick consultation, or printed on your system's printer. What's more, you can exchange data with other programs. Suppose you are maintaining your customers' billings to date. Want to know your smallest, largest and average customer billings and the variation among them? Pass the data to VisiTrend/VisiPlot - and depict the answers graphically, too. You'll find many ways to get more out of your information with the family of Personal Software programs.

**PRICE:**

**TITLE: DATA BASE MANAGEMENT**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Data Base Management allows the user to reprogram data to meet the individual's needs. The flexible program is accomplished programmer to understand uses of this system.

The system includes a data base configuration program, a file creation and management element, a sorting utility, a report formatting utility, a query and a search sort routine permits you to sort a 1,000 name mailing list in three and a half seconds. You can reprogram more than 10,000 different types of statements by merely changing two program DATA statements.

This program is suitable for office, educational or personal usage. The system requires Applesoft and an least one disk drive. A printer is recommended for portions of the program.

**PRICE: \$100.00**

**TITLE: DATA BASE MANAGEMENT SYSTEM**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** The DATA BASE MANAGEMENT SYSTEM (DBMS) is designed to perform a wide range of tasks involving the sorting, searching, and printing of a large amount of related information. Most previously written business programs deal with a specific application of data base manipulation; for example, mailing list programs, inventory control programs, client or patient history programs, and so on. All these specialized programs are very similar in nature with respect to the way they manipulate data: they STORE the data under one or more field headings, they SORT the data according to one or more of the fields, they allow the user to SEARCH through the data, and they GENERATE FORMATTED REPORTS providing the user with useful information.

DBMS takes advantage of these similarities by allowing the user to set up his own data base system layout. Thus this one program can perform all of the above tasks. DBMS also allows the user to design his own report formats. Merely think of the form of the print-out you want, then enter it into the system. (Reports may be up to 132 columns wide, limited only by your printer). This greatly increases the utility of the system.

If your task requires the manipulation of a large amount of related information, the DATA BASE MANAGEMENT SYSTEM can probably handle it.

Here is the MFNU of programs in DATA BASE MANAGEMENT SYSTEM:  
CREATE A NEW DATA BASE SYSTEM, EXAMINE THE PRESENT SYSTEM LAYOUT,

MODIFY THE SYSTEM LAYOUT, ENTER NEW DATA INTO THE SYSTEM, MODIFY THE ENTERED DATA, SEARCH THE DATA BASE, GENERATE FORMATTED REPORT, PRINT MAILING LABELS, COMPACT/SORT THE DATA BASE, CATALOG A DISKETTE, DELETE A DATA BASE SYSTEM, INITIALIZE A DATA DISKETTE, UPDATE SYSTEM PARAMETERS.  
**PRICE: \$100.00**

**TITLE: DATA FACTORY**

**PUBLISHERS NAME: MICRO LAB**

**DESCRIPTION:** For a long time, there has been a need for a truly versatile and powerful data base program for the Apple Computer. The Data Factory fills this void.

Introducing the Data Factory, a Disk Oriented Universal Data Management System, meaning that all data is stored on the diskette until needed. For sortings, searches etc. Only one column (Field) of data is loaded into memory. As a result, the only restrictions factor is the widest column in each record. A record containing twenty columns will use the same amount of memory as a record containing only one column.

The Data Factory allows you to manage large amounts of alphanumeric information such as INVENTORIES, MAILING LISTS, (FOR PRINTING MAILING LABELS), ACCOUNTS RECEIVABLE, ACCOUNTS PAYABLE, BUDGETS, RFCIPES, APPOINTMENT CALENDARS, WORK LISTS, SHOPPING LISTS, LIBRARY FILES, ADDRESSES, GENERAL INFORMATION, ETC. FOR BUSINESS OR HOME. The Data Factory is constructed of nine (9) Modules. Only the module being used is loaded onto memory, rather than the entire program, thus saving most of memory for manipulations data rather than program storage.

The program allows you an almost unlimited amount of flexibility in manipulations and displaying data to a Monitor or Printer. Every attempt has been made to make the program easy to operate for anyone with little or no computer experience. The program is extensively error protected and uses plain English prompts for ease of operation.

Below is a partial list of the features found in The Data Factory. The use of this program is limited only by the imagination.

Written in Applesoft Basic-user modified.

Use on systems with one or two Disk II drives.

Can be used with or without a Printer

Uses the new DOS 3,2,1.

Enter Data into any number of Columns (Fields) and Lines (Records) within your computers limits.

Enter ANY CHARACTER as data (Commas, Quotation Marks, etc.)

Column lengths of 1 to 239 characters.

Six (6) Sort variations for organizing data (Date & alpha/numeric).

Write sorted files to original or another diskette.

Four (4) Search variations.

Search from beginning or within a column of data.

Search for One Kind of item.

Search for MANY different items at one time.

Search for items falling within certain Numerical or Date Values.

Search using record numbers or data.

Level Search - Search down 10 columns (Fields) deep.

Make an index of data found in a column.

Compare two columns of data.

Perform all Routines on any column of data.

List all or part of your Data File with or without record numbers.

Three variations of Totaling (adding) up a numeric column.

Total, Average or Count a column.

Complete File Editing functions.



Change part of a line (Record) of Data  
 Delete a record of data  
 Delete a file.  
 Construct a new file combining other files.  
 Compute Disk Storage space remaining.  
 Extensive user error protection.  
 Complete Printer Routines.  
 Flexible formatting of data sent to monitor or printer.  
 Print out columns in any order, even more than once.  
 Save print-out formats to disk.  
 This is the tip of the iceberg, each Routine has further options.  
**PRICE: \$300.00**

**TITLE: DATA PERFECT**

**PUBLISHERS NAME: LJK**

**HARDWARE REQUIREMENTS:** Configurable to use with any of the 80 column boards of Letter Perfect word processing, or use 40 column Apple video. Lower case supported in 40 column video.

**DESCRIPTION:** Complete Data Base System. User oriented for easy and fast operation. 100% Assembly language. Easy to use. You may create your own screen mask for your needs. Searches and Sorts allowed. Utility enables user to convert standard files to Data Perfect format. Complete report generation capability. Much More!

**PRICE: \$99.95**

**TITLE: DATA-HANDLER**

**PUBLISHERS NAME: DIGI-SCAN, INC.**

**DESCRIPTION: FEATURES:**

- \* HIGHLY INTERACTIVE & MENU DRIVEN using easy to follow prompts - no disk swapping required.
- \* COMBINES SPEEDY DATA RETRIEVAL WITH REPORT CAPABILITIES offering vast format flexibility for immediate presentation with no need for utility programs.
- \* UP TO 3000 BYTE RECORDS - MULTIPLE KEY FIELDS
 

Maximum fields per record:	30
Maximum length of a field (characters):	100
Maximum number of sorts:	10
Maximum number of sort fields within each sort:	10
- \* RAPID & EFFICIENT DATA MANAGEMENT TECHNIQUES by allowing access to specific multiple fields of any individual data record.
- \* NO SOFTWARE UPGRADING - compatible with Sorrento Valley Associates 8" floppy drive and hard disks. Also compatible with Corvus hard disk. No upgrades or utilities needed.
- \* SOUNDEX SEARCH CAPABILITIES making possible accurate retrieval of data when precise information is unavailable.
- \* CAN BE USED WITH 1 DISK DRIVE.

**PRICE: \$195.00**

**TITLE: DATADEx**

**PUBLISHERS NAME: INFORMATION UNLIMITED SOFTWARE**

**DESCRIPTION:** Datadex is the easiest Data Base Management program for the Apple Computer. It is friendly, flexible and fast. Along with sheer speed, Datadex is easy to use. Data is entered and retrieved in a form suited to your application, because you design the screen. Datadex is written in Applesoft Basic, so it is compatible with any Basic program or file. With Datadex the commands and prompts are incredible user-intuitive. After information is entered, you can reformat - and all information automatically translates itself to the new format.



And now Datadex is available on the Apple Corvus Hard Disc. The Omninet network provides 64 users simultaneous access to the data base, and features full customer lock-out for data security.  
**PRICE:**

**TITLE: DATAFAX**

**PUBLISHERS NAME: LINK SYSTEMS**

**HARDWARE REQUIREMENTS: 40 or 80 column display screen**

**DESCRIPTION:** A free form, relational filing system designed to accommodate everybody's need to keep track of unstructured data. Information can be entered, stored, and accessed in any fashion desirable, without being locked into a predetermined structure. DataFax is adaptable to a variety of data management situations. No programming is necessitated, so anybody can use it. To be certain, anyone who has to keep track of random segments of information can benefit from the power of DataFax. Information is organized into folders, each containing as many separate screens of information as required, information that can be changed, added to or deleted whenever convenient. Once folders are created, you label them with keywords- a customer's name, a date, or any other significant category. When information is needed, it can be retrieved simply by typing in the keyword or words that DataFax will scan for until it reaches the particular data you want. There is even a keyword listing function, should you forget the keywords, and to allow optimum accessibility, information can be retrieved in a variety of ways. DataFax has been designed ergonomically, to easily parallel the way people think and work. The only structures resulting will be ones you have designed, hence DataFax will be to you a logical and natural extension of your thought patterns. Regardless of how large your data base system eventually becomes, retrieval of any particular folder generally takes less than two seconds.

The DataFax manual is created for simple use by anyone, data processing experience notwithstanding. Beginners can go through the step by step instructions and have the system functioning in no time. The more experienced programmer can use the Quick Reference Card, as well as the reference sections in the back of the manual.

Compatible with both hard and floppy disks, so as to be valuable regardless of changes in your system.

**PRICE:**

**TITLE: DATAKEYPER**

**PUBLISHERS NAME: ESP COMPUTER RESOURCES, INC.**

**HARDWARE REQUIREMENTS: Corvus hard disk drive, 5-1/4" and 8" floppy versions.**

**DESCRIPTION:** ESP dataKEYper is menu driven and handles up to 800 files. Each record holds up to 2000 fields; alphanumeric fields hold up to 255 characters. Volume management and access in the Corvus version of dataKEYper are handled automatically. Other capabilities include RESET button protection, automatic restart/recovery if power is lost, user selectable Auto boot (Corvus version only), a System Date and a Report Date, data file sort, file maintenance, file backup/restore, file query, data descriptor print utility, label making, data file organization change, and a report writer. Printer control is parameter driven.

The report writer may be used with any dataKEYper files, and it has automatic column alignment, automatic page numbering and date printing, display on the screen or on a printer, and totaling capabilities.

PRICE: \$249.95 Corvus version of dataKEYper  
\$ 99.95 5-1/4" floppy version  
\$149.95 8" floppy version

**TITLE: DB MASTER - UTILITY PAK #1**

**PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** DB MASTER UTILITY PAK #1 is an accessory to VERSION THREE of DB MASTER. It includes the following features:

1. A translator between the DB MASTER file format and standard Apple text files. The text files will be in DIF (Data Interchange Format) designed by Software Arts, Inc. for use with 16 sector Visicalc and any program you may write. We are actively encouraging other software producers to support the DIF, so that different programs will be able to "talk" to each other. You will also be able to transfer data which is stored in the DIF back into DB MASTER files.

2. A "Restructure" utility which will allow you to add, delete or change fields in an existing DB MASTER file without re-entering all of your data. This utility will also allow you to create a new file which is a sub-set of an existing file.

3. Replicate and Merge. With Replicate, you can create copies of your files, including all associated report formats, codes, short forms, etc. A user could then, for instance, send those copies to all of their field offices. Then, when the offices return their completed data disks, Merge will combine all of the data into one file for processing and analysis.

4. "Crashed" File Recovery. If one or more data diskettes are damaged, this utility will build a new set of disks, recovering as much of the data as possible.

**PRICE: \$99.00**

**TITLE: DB MASTER - UTILITY PAK #2**

**PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** Stoneware introduces the second package of accessory programs for DB MASTER users, featuring:

1. Mailing Label Printer

- Uses standard DB MASTER Label Formats
- Prints 1 to 4 labels across
- Up to 9 lines per label
- Prints 1 to 100 copies in one run
- Special formatting for best label appearance:
  - only leaves one space between fields, regardless of field contents
  - won't leave blank lines within labels

2. Global Editor

- Edit all of the records in a file, or any selected group of records
- Perform edits on 1 to 5 fields in a single pass through the file
- Edit types include:
  - replace field contents with a new constant value
  - replace field contents with a computed value
- Also includes Global Delete. Delete all or selected records from a file. Optional "Confirm Delete" mode allows you to inspect each record before confirming or canceling its deletion.
- Compute days between dates. Use any 2 date or auto-date fields or one field and the current date. Mixed MM-DD-YY, DD-MM-YY, or YY-MM-DD formats OK. Put the result into any numeric field.

3. Transaction File Merge

- A cross between Merge (Utility Pak #1) and the Global

Editor. Using two or more files with the same format, modify the records in one file based on data in the others. Example: Your main (Destination) file contains inventory information, including a field for "Quantity on Hand". Your Transaction (Source) file. Contains data on items added to inventory from incoming deliveries. Transaction File Merge can add "Quantity Received" from the Destination file and put the result back into "Quantity on Hand".

#### 4. Print Data Entry Forms

- Print forms that match your DB MASTER screen forms
- Print in three different formats, including 40 column and expanded 80 column forms.
- Use "Short Forms" (the same one you use for screen input and display) to print data entry forms when all fields are not required.
- Print multiple copies automatically.

#### 5. Special Reblocator

- Reblocks your files for extra space, instead of compactness. Use this module before adding or merging a lot of records to a multi-volume file to cut down on disk swapping.

#### 6. Change Read Protected Fields

- "Read Protection" hides fields from users of a file who sign on with a "Read Only" password. This module lets you change which fields are "Read Protected".

**PRICE: \$99.00**

### **TITLE: DB MASTER REVISION THREE**

#### **PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** COMPUTED FIELDS. Perfect for accounts receivable, inventory control and similar applications. Each record may now include up to 10 computed fields. And field values are automatically re-computed and displayed each time a record is edited.

**TOTALING IN THE SEARCH MODE.** Tell DB MASTER which field to total and which records to use. A running summary of records found and the field's sum, average and standard deviation are displayed on the screen.

**AUDIT TRAIL.** Option to automatically print each new record as it is entered.

#### **NEW REPORT GENERATOR OPTION CAPABILITIES:**

- \* Number Formatting with commas.
- \* Auto-Date Record Selection for printing daily, monthly, or annual reports.
- \* Printing of averages and standard deviation when printing column totals.
- \* Ability to make last minute changes in printer and report parameters.

#### **PLUS THE FEATURES THAT MADE DB MASTER NUMBER 1.**

Dynamic Prompting. User designed screen forms. Short form capability. Powerful report generator. Custom DOS for faster retrieval and program chaining. Automatic data compaction. Password file protection. Multiple sort keys for fast, convenient records retrieval. And much, much more.

#### **MORE POWER WITH DB MASTER UTILITY PAK #1.**

**RESTRUCTURE.** Modify a file format without re-entering your records. Add, delete, move, modify, or re-name fields - even add new computed fields to existing files.

**INTERFACE.** Move data back and forth between your DB MASTER files and Data Interchange Format (DIF) text files. Exchange data with Visicalc, Visiplot, Executive Secretary, etc., or your own programs.

**REPLICATE.** Duplicate everything in your DB MASTER files except the records. Use the replicates for monthly or yearly files, or



send them for data entry at multiple locations.

MERGE. Combine data from two or more files with the same format (such as Replicates) into one file. Special "Selective Merge" and "Merge and Delete" options can maintain separate active and inactive files, build subfiles, and many similar tasks.

UPDATE YOUR DATA BASE MANAGEMENT WITH DB MASTER VERSION THREE.

See the new DB MASTER Version Three at your local computer store. Put it through its paces. Then add the power of Utility Pak #1, the first in a planned series of Utility Paks.

If you're a registered owner of an earlier version of DB MASTER, send one or both of your program diskettes, plus \$15.00, to STONEWARE for an update to Version Three.

#### I. DATA TYPES:

Numeric - there are four numeric data types. Each accepts only numerals, and, if appropriate, a single negative sign or decimal point. Numbers are stored in their compacted (binary) form for increasing storage capacity:

- \* 0 to 255 (one byte)

- \* +/-32767 (two bytes)

- \* Floating point (9 digits, 5 bytes)

- \* Dollar/Cents fields are pre-formatted, use right to left (calculator style) data entry (9 digits, 5 bytes)

Computed - up to 10 per record. Recalculated after each edit, add, subtract, multiply, or divide any 2 fields or 1 field and a constant.

Alphanumeric - 1 to 30 characters (for longer comments, combine 2 or more fields).

Yes/No - 1 character, only accepts "Y" or "N"

Social Security, Date and Phone Number fields are pre-formatted. The cursor skips over the dashes automatically during data entry & backspacing. These fields cannot be left partially finished - they must be left empty or completely filled in.

Auto Date fields automatically contain the date of the last time each record was edited (changed). Auto Date fields make it very easy to print daily update lists.

#### II. STORAGE METHOD & ACCESS TIMES:

DB MASTER uses an ISAM (Indexed Sequential Access Method) filing system. Records are stored and maintained automatically in their primary key order. The primary key is user defined, and includes the first field or fields in the file, to a maximum of ten fields or 35 bytes. Any record on a diskette can be retrieved in about 3 seconds if requested by its primary key. Secondary keys may also be set up and maintained automatically on the user's choice of fields. Records will be retrieved by secondary keys in about 5-7 seconds.

III. Sorts are only necessary when printing reports in other than primary key order. Otherwise, DB MASTER never has to do any sorting.

#### IV. CAPACITY:

- \* Up to 1020 bytes per record

- \* Up to 100 fields per record

- \* Up to 9 screen pages per record

- \* Up to 10 fields in primary key

- \* Any number or secondary keys

- \* Supports multi-diskette files. Maximum file size depends on a number of factors. Typical range is 1 to 5 megabytes.

#### V. REPORT GENERATOR:

- \* 0 TO 9 lines of comments or footnotes

- \* 0 TO 9 lines of column titles

- \* Up to 100 columns on as many as nine lines

- \* Up to 24 computed fields per report. Add, subtract, multiply, or divide or exponentiate. Compute with record values, constants or other computed fields.

- \* Five Horizontal Subtotals (for totaling fields within a record)



and a Grand Total

- \* Column totals, averages, and standard deviations
- \* Sort on 1 to 6 fields
- \* Optional subtotal (control) breaks and page breaks when sort field values change
- \* Automatic number formatting with commas
- \* Comment fields
- \* Auto page numbering & report dating
- \* Summary Only reports print subtotals and totals only
- \* Special formats for screen reports and printing labels
- \* Automatic printing of daily, monthly or annual reports

#### VI. SPECIAL FEATURES:

- \* "Short Forms" display only a portion of your form for rapid repetitive editing. (Also useful for emulating hierarchical data base systems.)
- \* Three levels of password file protection
- \* Auto "data packing" for increased disk capacity
- \* "CodeFields"(tablelook-upfields)store shortcodes, print long descriptions on reports.
- \* Calculator mode for performing math functions with field values.
- \* Daily Update lists print all records added or edited on the current date, since a specific date or within a range of dates (file must include an Auto Date field)
- \* DB MASTER includes its own Disk Operating System which is faster and more efficient than Apple's DOS. [All disk access (including program chaining!) done with fast "RWTS" routines.]
- \* Audit trail option prints hard-copy of each new record as it is added to the file.

#### PRICE:

#### TITLE: DB MASTER

#### PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS

DESCRIPTION: DB MASTER is the new name to be reckoned with! Practically every business uses lists in one form or another...client lists with accounts receivable...lists of suppliers (including their locations (terms)...lists of materials, specifications, inventories, Government forms and filing dates, research & reference data, mailing lists...and all those special lists unique to your business.

At last, you can apply the power of an inexpensive desktop computer to data management problems by combining DB MASTER and the Apple II computer! DB MASTER is easy-to-use, even with no programming experience. You can build your own screen "forms", just like the ones you use on paper, including automatic formatting for easy entry of dollar amounts, phone numbers, dates and social security numbers. Once entered, your records can be retrieved and displayed on your screen - or combined to print the report you need.

An exclusive feature of DB MASTER is Dynamic Prompting (TM), which puts operating instructions on your screen...whenever you need them!

DB MASTER is versatile. It handles multi-diskette files with thousands of records - up to 1024 characters (four times the record size of other data base managers) per record - with all the search methods you need.

In fact, DB MASTER can retrieve any record from a disk in less than three seconds! And it includes the most powerful report generator you can buy for the Apple II.

If you need big computer features at a small computer price, consider what DB MASTER offers:

Machine language ISAM filing system with primary and secondary keys.

Password file protection.

Up to 9 screen "pages" per record.

Automatic data "packing" for increased disk capacity.

Edit mode includes calculator functions.

Wild card and partial string searches.

Report generator - including computed fields, subtotal & page breaks, number formatting, multiple lines per record, code (table look-up) fields, printer & screen reports and summary only reports.

**PRICE: \$189**

#### **TITLE: DISK LIBRARY**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** Disk Library is an elegant, user-oriented system for creating and maintaining a thorough, cross-reference index of all your disk-based programs and data files. It provides for Automatic entry into your library file of the full catalog of any Apple diskette. Disks formatted under other operating systems (such as Pascal and CP/M) are easily entered from the keyboard. Written entirely in machine code. Disk Library's operation is both smooth and swift.

**EASY TO OPERATE**

- \* Menu-driven
- \* Single keystroke operation
- \* Super fast Sorts by any field (1200 items sorted in 4 seconds)
- \* Works with all disks created under DOS 3.1, 3.2 and 3.3
- \* User definable Program Types (e.g., Business, Game, Utility) of up to 15 characters each can be assigned to each program entry with single keystrokes or via block actions
- \* On-screen and printed Summaries, by File Type (Integer, Applesoft, Binary, Text) and by Program Type (e.g., Accounting, Graphics, Music)
- \* Block Actions (global editing/deleting)
- \* Instant Searches...by full or partial string (find any item in 1/3 sec.!
- \* New Files can be Appended to existing records, in memory or on disk
- \* Unique Feature: User can redefine the Disk volume Number displayed by the DOS Catalog Command
- \* A Unique volume Identifier and Disk Title can be Assigned to each disk entry in your library file
- \* Printed Reports are attractively formatted for easy readability

**EASY TO LEARN**

A 75 page, professionally prepared user's guide is provided: Including:

- \* Introductory Tutorial, will have you using Disk Library in 10 minutes
- \* Advanced Tutorial, enables you to master Disk Library's many advanced features
- \* Reference Section, provides quick answers for experienced users
- \* Applications Section, gives you many ideas for maintaining your library
- \* Index, enables you to find whatever you need

**PRICE: \$59.95**

#### **TITLE: FILE CREATOR/RETRIEVER**

**PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS:** Centronics 739 printer with grappler interface

**DESCRIPTION:** This software program lets you write your own software. You can create, store, and retrieve any kind of file

you need- document your continuing education courses or make a recipe file for your wife. No programming skills are necessary.  
**PRICE: \$50.00**

**TITLE: FILE WHIZ (INFORMATIVE MANAGEMENT SYSTEM)**

**PUBLISHERS NAME: SOFTHOUSE**

**DESCRIPTION:** Even if you already have a data manager, File Whiz is useful to you. It can help keep track of names and addresses, expenses, tax records, customers, students, events- nearly any record you need to keep. It makes editing and creating files simple, as well as searching for particular information, arithmetic on entries and provide hard copy.

**SUBFILE MANAGEMENT-** You can build a subfile of all records which meet your specifications. Your specifications can consist of strings, partial strings, or numerical comparisons and can involve as many fields as you wish. The subfile is stored alongside the file in memory for faster processing and can be worked on arithmetically, saved to disk displayed and printed as if it were a separate file.

**ARITHMETIC CAPABILITIES-** Simple commands let you add or subtract the values of any field for every record in your file or subfile. File Whiz's "buffered" system gives you cumulative results for successive operations.

**EDITING FEATURES-** You can change field attributes without having to re-enter data, sort on any field, add, insert, change or erase records, one or more simultaneously. With a few keystrokes you can even delete the entire subfile or all records save those on the subfile. You can also skip back and forth through your file or find the next record which meets your specifications.

**DISPLAY/PRINTER SUPPORT-** Records can be displayed or printed one at a time or on a group basis. Both records and fields can be selectively displayed or printed. Printouts can include text (headings, comments, etc.) and column adjusted field descriptions. Most printers can be connected to File Whiz just by answering a few questions. File Whiz WILL work without a printer. Print commands simply become display commands.

**BUILT-IN COMMAND PROCESSOR-** This feature facilitates initiating and sequencing multiple functions on your files without having to deal with cumbersome menus. Menus are displayed only when asked for.

**FILE SUPPORT-** Files can be created, loaded, saved, merged (catenate), and deleted. Files can be accessed from your own BASIC programs.

**MISCELLANEOUS-** Each field accommodates up to 239 characters; Data disks can be initialized under File Whiz control; Easy to use entry features simplify editing; and more.

**PRICE:**

**TITLE: FILEMASTER**

**PUBLISHERS NAME: BUSINESS MASTER**

**DESCRIPTION:** The largest possible number of records are fit into the space allowed and garbage collection problems are nearly annihilated with an optimizing memory management system.

The program is completely menu driven with options displayed directly on the screen the whole time.

Nine files are allotted on each disk, with each file capable of holding up to twenty fields with twenty-three characters apiece. To increase character capacity, simply combine more than one field. Fields can be added, deleted, renamed, or reorganized at any time.

FileMaster also contains WordMaster, the ideal word processor for the informal user. Full upper and lower case output allowed to



any printer. All the standard capabilities necessary for document preparation without a number of hidden commands is present in WordMaster. It features easy insertion and deletion characters, indentation, right justification and line spacing. All of these benefits incorporated into one unit of software, instead of the two or three normally required. FileMaster's system of search and sort is another unique addition. FileMaster can execute simple mathematical processes between fields (i.e., adding two or more fields for one total). This feature is perfect for retaining subtotals, computing payrolls or making simple sales projections. Records can be entered into FileMaster in any desired order, permitting the maximum flexibility possible, as well as allowing the convenience of instantaneous access to all records. FileMaster files cannot expand too much since an option is available to split a large file into two smaller files for easier handling. Similarly, two small files can be merged into one large file, facilitating search and sort for one thing. And any desired format can be copied for new files by a single keystroke. Almost no format cannot be replicated. Fill in any preprinted form or create a new one for a professional touch. Total flexibility in report formatting permits the user to create a report fit to personal requirements easily. Two different report formats common in the business world are already built into the FileMaster. The first is a list of records exactly as they are displayed on screen. The second is a list of programmer selectable fields with each record displayed on a single line across the page. These built in reports will eliminate the trouble of the user writing what he is certain to require. Print a personal telephone/address directory, mailing labels, checks, or hundreds of other common uses.

**PRICE: \$149.00**

**TITLE: FORMULEX**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Allows you to organize your paperwork into a comprehensive data system customized to your specifications. You design data entry screens that match your paperwork- whether you're using shipping orders, invoices, questionnaires, or other business forms. Once you set up the system, anyone who can type on the keyboard can enter information rapidly and accurately.

This program:

- utilizes simple commands for formatting screens, saving data, and retrieving forms in the Pascal system.
- incorporates easy to use forms features otherwise unavailable in the Pascal language.
- lets you define exactly what kind of information ought to appear in each field, and what information is required on the form
- automatically fills redundant fields

-selectively scans files for the data you specify  
Organized data entry, the first step of most applications programs. Anyone- programming experience notwithstanding- will find it easy to set up a sophisticated input procedure using Formulex's simple screen formatting commands. And because Formulex makes standard Pascal text files, you can edit files or write your own programs to access your Formulex data.

As many as ten field specification commands are available to define exactly what kind of information will fall into each field. A case in point, you can program Formulex to reject an invalid transaction code or an incomplete mailing address. Possesses built in commands which let you add, modify, delete, and list your data files without any programming. Written in Pascal.



**PRICE: \$75.00**

**TITLE: IFO-DATA BASE MANAGER PROGRAM (VERSION I)**  
**PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**

**DESCRIPTION:** The Information File Organizer (IFO) can be used for sales activity, inventory, check registers, balance sheets, price markups, library functions, client or patient billing and several other utilizations. No programming knowledge is needed to use the IFO. Commands are all in English and are self-prompting. As many as 20 headers can be created and a maximum of 1,000 records can be stored on a single disk.

Data can be organized in ascending or descending order on any field and cross-referenced using five criteria on up to three levels of searches. Mathematical functions (addition, subtraction, multiplication, squaring) can be executed in any two columns of data or on a column of data in combination with a constant to create a new column of data. Information from the data base can be printed in up to ten different report formats using a 40, 80, or 132 column printer (serial/parallel acceptable) or may be viewed solely on the screen. There are several error protection implementations in the program to make it easy to use and can be run error free.

**PRICE: \$120.00**

**Version II (2 drive) \$200.00**

**Version III (Corvus) \$450.00**

**TITLE: INFORMATION MASTER**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** Information Master is a highly sophisticated data management software package that solves your record-keeping problems- with remarkable ease! With this package you can define, enter, sort, search, modify, delete, select, and print records. You can even design your own informative reports.

The problem solver

Information Master will organize and print everything from mailing lists to stock market data. The list of applications never ends. You simply specify what kinds of records you want to store, type in the information, and let Information Master do the organizing, calculating, and reporting.

Design your own reports and labels

With information Master it's easy to do. You control what will be printed, which records will be selected, and where they will print. You may specify different column widths, print your records in ascending or descending order, specify calculations to be performed by Information Master during print time, and include words, numbers, symbols and punctuation within the report. Even more features...

string search)

simple step (global change/global delete)

Maximum specifications

1000 records per system (dependent upon record size)

20 fields per record

99 characters per field

5 sorts with 6 keys per sort

And to top it off

Here are two very useful companions that add even more power to Information Master. These accessories include powerful features that expand the already extensive capabilities of Information Master.

Data Master- Allows you to alter the file layout of existing Information Master files without re-entering data. Add, omit, change fields, subdivide and append files selectively.

Transit- Lets you convert VisiCalc files, The Store Manager files (and almost any other files you may have) into Information Master files for revolutionary compatibility.  
**PRICE: \$189.00**

**TITLE: INFOTREE**

**PUBLISHERS NAME: SIR-TECH SOFTWARE, INC.**

**DESCRIPTION:** A tree-Structured Information System for the APPLE II Computer. Written in PASCAL. INFOTREE is an interactive information storage and retrieval program written in UCSD PASCAL for use on the APPLE II. It allows the user to easily store and recall information, and organize it in any manner desired. All data stored by INFOTREE is referenced by a "key", a string of up to 18 characters. Associated with any key can be from 0 to 18 lines of text. In addition, any key can "own" a list of ..SUB-keys, allowing the user to separate his data into different logical groups. This separation can be taken to any level desired as any ..SUB-key can own its own list of ..SUB-keys. The use of binary trees as a data structure allows extremely fast access to any item stored, while preserving the quick update time needed in an interactive system. This is not true, for example, in a system using linked lists or a sorted list. Coupled with its speed, INFOTREE is capable of storing 4,380 records on a single diskette, making the storage of fairly large data bases possible.

As INFOTREE is an interactive system, we have made every effort to reduce the amount of operator typing needed to run the system. The user merely has to press the first letter of the command desired. INFOTREE fills in the rest and then asks for the key(s) it needs to execute the command. Pressing recalls the keys used in the last command one at a time. INFOTREE also automatically formats the keys as they are typed in, into a neat indented format.

The list of INFOTREE commands include ADD, CHANGE, DELETE, RECOVER, LIST SUBKEYS OF WHAT IS, PRINT SUBKEYS, MAILING LABELS FOR SUBKEYS OF, XREF LISTING OF SUBKEYS OR FILE KEY PRINTOUT, INFO, HELP, and QUIT. A secondary Utilities program allows the user to prepare diskettes for use by INFOTREE, make back-ups, and "compress" the file, (to increase storage efficiency and speed on a crowded diskette).

Typical INFOTREE applications include personal information, mailing lists, phone number directories, appointments, scheduling, memos - basically anything that can be typed into the computer can be stored, the only limitation being the users imagination.

**PRICE: \$69.95**

**TITLE: ISAM-DS**

**PUBLISHERS NAME: DECISION SYSTEMS**

**DESCRIPTION:** ISAM-DS is an integrated set of routines for the creation and manipulation of indexed files. ISAM-DS provides capabilities comparable to those on large main-frames. You can rapidly retrieve records by key value or partial key value (retrieves any record in a 200 record file, 60 char/record, in less than 3 seconds compared to a maximum of 38 seconds for a DOS sequential file). Files never have to be reorganized. Duplicate key values may be used. Records may also be retrieved in sequence. ISAM-DS routines are easily integrated into Applesoft programs - they use less than 3K RAM plus an index table.

**PRICE: \$50.00**

**TITLE: MICRO INFORMATION SYSTEM****PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Handles accounts payable, inventories, appointment calendars, cost estimating, real estate listings, sales solicitations, manpower accounting, selective mailings and label printing, dietary information, phone directories and much more! Easily change the format to suit your specific data needs. M.I.S. uses a sophisticated multi-level data base structure for quick access to desired information, plus an automatic update function for modifying records which pass your selection criteria. The Micro Information System also features a single disk sort (numeric/alphanumeric) on any field in with ascending or descending sequence. Easy to use M.I.S. includes an extensive documentation manual.

**PRICE: \$99.95**

**TITLE: MUSEUM COLLECTOR CATALOG****PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** A powerful data base system for museums, professional and amateur anthropologists, naturalists and collectors. The system contains eleven programs in which collection, staff and administration data can be entered, deleted, changed, sorted, searched and printed in multiple formats.

**COLLECTIONS** will hold catalog and accession numbers, category, description, value, loan, disposition, etc. data and print multi-reports, labels, and catalog cards.

**RESEARCH** will list staff and associates, their research projects, publications and status. Multi reports

**SCHEDULE** a listing of staff assignments, meetings and day to day appointments.

**LITERATURE FILE** a personal listing of papers and articles for individual research projects. Immediate recall and sorting. Multiple print outs.

**SUBSCRIPTIONS** a catalog of publications and journals, subscription dates, cost, and use.

**LIBRARY** includes books, publishers and loan information.

**STAFF/PHONE** a useful listing of staff, friends, family and contacts. Name, address, phone, etc. data.

**TEXT EDITOR** a powerful and easy to use text editor for writing labels, letters, reports, and papers.

**MAIL LIST** a listing for mail labels, associates and grant foundations.

**FILE TRANSFER** a program that transfers your data to other disks or over the telephone. Trade you data throughout the world.

**DATA BASE** create your own data base list. Anything you want, in your own words or titles.

This disk can be copies for back-up purposes or modified by the user in DOS 3.2.2 or 3.3.

**PRICE: \$150.00**

**TITLE: PASCAL DATABASE****PUBLISHERS NAME: ARIZONA COMPUTER SYSTEMS**

**DESCRIPTION:** Program offers unlimited applications for such diverse data as mailing lists, personal business accounting, inventory, job estimates, sales analysis, and property management. Clear screen instructions enable even the novice to operate the program. Features include on-line interaction, update, search and traverse files, sort on multiple fields, maintain records in several sorted orders; screen formatting - you design the layout of your files; immediate and automatic



indexing of information at data entry; and user definable data description - you define file, record, and field names. Generates easy-to-read custom reports.

**PRICE:**

**TITLE: PEGASUS: RELEASE 2**

**PUBLISHERS NAME: SHAKTI SYSTEMS, INC.**

**HARDWARE REQUIREMENTS: Printer and two disk drives.**

**DESCRIPTION:** Pegasus is a user oriented data base management system written in Pascal. Pegasus consists of a library of routines which can be called from application programs. The system can be used by the inexperienced or the professional programmer to make complete business programs. You can define a data base, insert, delete and modify records, view the database, format and print records, select subsets to print or write to disk files, or carry out global editing functions. Absolute record numbers, record number ranges, or a series of relational tests can be used to create subsets. These can be used as input to applications programs. Insertion of records into the database can be done interactively or in a batch mode from a text file. The user defines which fields are to be sorted when setting up the data base. All sorting necessary done at time of entry, as to be non-essential later.

**PRICE: \$199.95**

**TITLE: PFS (PERSONAL FILING SYSTEM)**

**PUBLISHERS NAME: SOFTWARE PUBLISHING CORPORATION**

**DESCRIPTION:** Using the concept of designing a form on the screen, PFS lets you create a file of information on any subject you wish without programming. You can catalog your stereo record collection, 35mm slides, magazine articles, daily expenses, or your club's membership list. Using PFS at work you can make better decisions by creating files on inventory, customers, or orders and accessing them in seconds.

To use PFS you simply design a form on the screen by typing the names of the items you want to store information about. Once the form is created you tab from item to item and fill in the information. This can be a single piece of data or several pages of text. Up to 1000 forms can be stored on a diskette. Looking up information is just as easy. PFS can search for a number, a single data item, or a word within a page of text. All forms that match are displayed on the screen. You can browse through each one and change, delete, expand, or print it. PFS even has a print formatter that lets you create mailing labels. PFS software is different. It is not a specialized application package or a complex programmer oriented data base manager. It is a personal filing system that lets you communicate with the computer using meaningful everyday concepts to rapidly create files on any subject matter you require.

**PRICE: \$99.00**

**TITLE: QUICK & EASY DATA MASTER**

**PUBLISHERS NAME: ADVANCED SOFTWARE TECHNOLOGY, INC.**

**DESCRIPTION:**

**AN UNFORGETTABLE EXPERIENCE IN DATA MANAGEMENT**

**QUICK:**

- \* Entry and access to all the data that your computer will ever store.

- \* The Data Base is written in unprotected basic so it can be quickly and easily modified.



- \* Hard Disk compatible with no changes.
- \* Quick search by multiple fields using separate ranges.
- \* No limit on the maximum number of records except disk space.
- \* Sorting is performed as data is entered.
- \* Simultaneous access and data transfer to multiple files.
- \* Use wild cards to search with.
- \* Over 100 math calculations possible per data base.

#### EASY:

Design & setup of your application with very sophisticated custom specifications.

- \* A/R Aging Report
- \* Inventory Re-Order Point
- \* Inventory Status
- \* A/P Cash Requirement Report
- \* Weekly Sales Log
- \* Salesman Commission Report
- \* Appointment Schedules
- \* G/L Trial Balance
- \* Customer Account List
- \* General Ledger
- \* Accounts Receivable
- \* Chart of Accounts
- \* Library Management
- \* Customer List
- \* Personnel/Client Files
- \* Grade Computations
- \* Restaurant Control Pkg
- \* Inventory
- \* Insurance Brokerage Pkg
- \* Medical Billing
- \* and many more .....

#### SPECIFICATIONS PER DATA FILE:

Maximum Field Size: 245  
 Maximum Fields: 200  
 Maximum Calculations: 200  
 Maximum Record Size: 3,000  
 Typical Access Time Under 5 Seconds!

**PRICE: \$69.50**

#### TITLE: RECORD LIBRARY

**PUBLISHERS NAME: COMPUTING CONCEPTS**

**DESCRIPTION:** A system designed for music tape and record collections. Information is cross referenced by title, composer, and performance. Multiple performances can be listed per title. Catalog data may be stored, with additions and deletions made at any time. One disk with four page documentation manual.

**PRICE: \$19.95**

#### TITLE: REQUEST

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION: DATABASE MAINTENANCE:**

Uses sophisticated screen formatting and data entry.  
 Generates it's own screens automatically.  
 Handles records up to 4K in length, using multiple screen pages.  
 Automatic data compression for increased disk capacity.  
 Uses Superkram (access method for incredibly fast access, less than .2 seconds for a record).  
 Automatic index creation/maintenance.  
 Automatic maintenance capabilities.

"Goof Proof" error handling.

Input can come from VisiCalc or Source.

**DATABASE SELECTION:**

Uses screen masks to form query.

Provides extensive search capabilities.

Search arguments can include arithmetic/boolean functions, multi field comparisons.

Queries can generate input for automatic database maintenance.

Queries can be stored in "Query Library" and executed from menu on demand.

Any number of fields can be queried concurrently.

Query output can be routed to disk, CRT report formatter, VisiCalc

or Source.

**DATABASE REPORTING:**

Automatic headlines.

Automatic field editing.

Report fields can be calculated, ..SUB-totaled & cross footed in any manner desired.

Optional counter breaks may be set.

Automatic grand totals.

Automatic statistics.

**PRICE: \$225.00**

#### **TITLE: SCIENTIST**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Scientist is a powerful data base and statistical package which will turn your Apple into your best analytical tool. Using the package you can establish relationships between data sets, find best fit lines, establish relationship equations, and plot the data and its equation in high resolution graphics. The system will give you the appropriate statistical test values, analyze distributions, and give you test statistics values. Included are such powerful functions as Chi-squared, Normal-distributions, Student-t distributions and Poisson distributions. These elements even support themselves.

**PRICE: \$99.95**

#### **TITLE: STATPRO**

**PUBLISHERS NAME: BLUE LAKES COMPUTING**

**DESCRIPTION:** STATPRO is an integrated system of software that was designed for modeling of the environment. Since this modeling is especially complex, numbers, by themselves, didn't show a great deal. To understand these numbers, graphic representation of the data and computed results were made. This is the first time a microcomputer has completely replaced mainframe statistical software on such a large scale. If your needs are for business, statistical analysis, or research, your job will be easier using this completely menu driven system. Due to the sophisticated nature of these programs all efforts for nearly 1 year were toward making the system user friendly. It has been rigorously tested by statisticians, businessmen, and other non-computer people with their recommendations used in making this system easy to use.

Statpro consists of hundreds of programs that are used by each other to make an easy to use, yet very powerful system. It differs from ordinary programs in that all data created can be received and sent to other parts of the system. This means that no extra work need be performed by the user to go, for instance, from Questionnaire entry to the graphics of the answers and from there to print mailing labels based on results of a questionnaire

survey. The entire system is written in APPLE PASCAL which is a UCSD based PASCAL with additions made to the graphics.

**ALL PARTS OF STATPRO HAVE:**

- 1) Complete Data base entry/sort/retrieval/printing
- 2) Individual record flagging for maximum selectability
- 3) Data receive and Data send
- 4) Apple II & Apple III compatability
- 5) Corvus & Profile compatability
- 6) Unique Disk sort that limits work area only by disk size
- 7) Sample data for first time use
- 8) Naive user input on documentation and prompts

**PRICE:**

**TITLE: THE AUDIOVISUAL CATALOGING SYSTEM**

**PUBLISHERS NAME: CAVRI SYSTEMS**

**HARDWARE REQUIREMENTS: selected VCR, and color monitor with audio**  
**DESCRIPTION:** Combines a file management system for audiovisuals with the CAVRI Interactive Video System. Permits a user to store text and keywords describing videotaped materials then subsequently carry out a computer search to retrieve specific text and/or video material desired.

**PRICE: \$1900.00**

**TITLE: THE DATA REPORTER**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** The Data Reporter is not simply a data base. It is a complete information processing system including a text editor, a data graphing and statistical analysis program, a label maker utility, and a powerful, easy to use database.

**PRICE: \$220.00**

**TITLE: THE MICROCONDUCTOR (TM)**

**PUBLISHERS NAME: MICROCOMPUTER TECHNOLOGY, INC.**

**DESCRIPTION:** Compose any software program by simply answering the questions, YOU Describe the file layouts, YOU Specify the print formats, YOU Design the update functions.

The MICROCONDUCTOR (TM) directs your computer to compose, organize and summarize all information you need to solve your software and business problems. With The MICROCONDUCTOR (TM), your computer will be able to compose any record-keeping software you need. In the office, The MICROCONDUCTOR (TM) can help with anything from accounts receivable to property management. You'll find that The MICROCONDUCTOR (TM) is ideal for the shop too. Let it take care of your inventory records, sales analysis, price lists, and more.

The MICROCONDUCTOR (TM) is not just a file manager but a true Data Base Management System suitable for both the novice and professional users.

Some of the modules of this masterpiece are:

**DATA FILE** - One step file creation. Just set it, and forget it.

**MAINT.** - Manipulate your data files with ease; add, delete, modify, scan, relocate, and more.

**SORT** - Sort any number of fields, in any sequence, ascending or descending order.

**UPDATE** - Single or dual file report and update utility.

The MICROCONDUCTOR (TM) is power at your fingertips! Power to set up, maintain, sort, report, and update data files at whim. Just imagine: with the MICROCONDUCTOR (TM) you can establish a custom mailing list system in 30 minutes, accounts receivable in 2 hours, a complete business system in only a few working days.



Never before has your computer been given such power!  
DATA FILES - No limit on the number of records a file can have.  
FIELDS - Any type (string, integer, single, double). Eight entry modes (including defaults, counting, and suppress).  
REPORTS - Four ways to generate reports. Total numeric column(s). Print on any paper in any format (statements, labels, etc).  
SORT - Any field(s) in any combination (i.e. multiple-key sort). Any size file, numeric or ASCII. Ascending or descending.  
MAINT. - Command anticipation. Record duplication. Direct access and sequential search.  
UPDATING/MERGING - Add, subtract, multiply, divide fields. Combine results from previous calculations. Test for any condition and take action.  
**PRICE: \$299.00**

**TITLE: THE MINI FACTORY**

**PUBLISHERS NAME: MICRO LAB**

**DESCRIPTION:** Is a beginning mode of the Data Factory for those with lesser needs. Can be expanded to the Data Factory when the user's requirements multiply.

**PRICE: \$150.00**

**TITLE: TRANSACTOR**

**PUBLISHERS NAME: SOFTAGON, INC.**

**DESCRIPTION:** Let TRANSACTOR give you the CONTROL you need to apply the KNOWLEDGE you have.

TRANSACTOR is an Applesoft transactions oriented data base manager which is ideally suited for small businesses, educational or personal use.

Its operation is very simple and it is heavily documented to give you details on total internal operations of the programs as well as overall operation.

VERSATILITY PLUS!! Full program listings allow you to customize TRANSACTOR to your individual needs.

TRANSACTOR places information at your fingertips and is easy to adapt to the application or filing system you want. A valuable, effective tool for OPTIMUM INFORMATION HANDLING!

All programs are fully listable and come complete with ..SUB-routine summaries for program modification. 2,000,000 byte capacity. High speed search of multiple or single keys, or by range of keys. Extensive, instructional manual with examples, in a convenient 3-ring binder. Reports are generated in vertical or horizontal format for ease of data analysis. Multiple input templates within the same database. Indexed Sequential Files (ISAM). Insertion sort.

**PRICE: \$69.00**

**TITLE: VERSAFORM**

**PUBLISHERS NAME: APPLIED SOFTWARE TECHNOLOGY**

**DESCRIPTION:** A business forms processor is a sophisticated yet simple to use transaction management program.

The central feature of such a program is its ability to process multiple transactions under a single heading. This is unique among all existing data or file management programs currently available on low-cost microcomputers.

Instantaneous updating within a specified form yield running totals, cumulative tax or tariff charges, and correctly calculated sub-total extensions by line.

Once the information has been entered and processed, it can be sent back to a pre-printed form or blank paper that becomes its



own form. Management reports can easily be produced summarizing information from the completed forms.

#### Paper Forms Productivity

VersaForm is a powerful software system that operates within the familiar structure and work flow of existing paper forms. It requires no computer background to use. Yet it will enhance the accuracy and speed of handling the information you currently process. Errors are minimized. Consistently and thoroughness are enhanced. Even unskilled clerical staff can quickly learn to use it.

#### Streamlining Your Operation

Almost every organization has pre-printed forms. They streamline and standardize the way information is handled. Business forms provide an "information structure" so that mistakes, omissions and incomplete work can be minimized. Included in this "structuring" of information is the paper flow or process by which a form is completed. These paper flows are not only vital to the orderly conduct of your organization, they are difficult to change. Further streamlining your administrative paper flows with a computer requires software programs that make only minimal changes in the way you do things now.

#### The Personal Computer Revolution

The personal computer is among the newest products of advanced technology. These small, inexpensive systems offer cost savings, greater accuracy and overall improvement in handling information. The key factor in the widespread acceptance of the personal computer has been the availability of inexpensive, professional programs. With just a few high quality programs, personal computer users have been able to process information at tremendous savings when compared to previous methods.

VersaForm is unique in the world of software in that it is the only system specifically designed for total forms processing on a personal computer. No other program offers its simplicity of operation combined with the power, flexibility and comprehensive approach to forms.

#### Business Forms Interface

VersaForm provides a versatile business forms interface to the personal computer. It enables business people to work in their own terms, using existing forms and paper flows to program a computer.

If you can design a rough form with pen and ruler for the office copier, you can instruct VersaForm to automate your business records. Clerical staff who now fill in paper forms can enter information into your computer. VersaForm can even be instructed to catch mistakes that new or inexperienced people often make with both forms and computers. Perhaps most significantly, VersaForm gives you a way of transferring your working experience and insight to another person. This allows those less experienced than you to take advantage of your expertise. Their productivity is enhanced and forms are completed to your standards without compromise.

#### Management Information When You Need It

Because you're working with information and forms that you already understand, management reports are a snap to produce. Sales summaries and inventory reports can be done on the spot. You can summarize sales by customer, by product or by region. The ability to produce this information when you need it, without disrupting closing tallies or accounting cycles, will enable you to respond to any demand for information.

## Using Existing Forms

Even when you're using a computer, you still need paper forms. Purchase orders, invoices, statements, sales orders, personnel index forms- the documents that all businesses require- can now be processed by VersaForm. Either use your existing forms, or design new ones that incorporate even more advanced processing and error-correcting techniques. VersaForm lets you use either or both without complaint or difficulty.

## Structured To Grow With Your Skill

While VersaForm is oriented specifically to work with forms, it by no means limits you to rigid formats or lay-out designs. This is important because as your business information needs or skills change, your information system must adapt.

VersaForm is so versatile that it performs many functions usually assigned to data base managers and file management systems. From simple applications like directories and names lists to the more complex uses such as inventory management and shop floor reports, VersaForm may be the only "data management" system you'll ever need.

As a software investment, there is hardly a single software program around that matches the utility and value of VersaForm. Ask you local computer store for a demonstration.

## PRICE:

### TITLE: VISIDEX

### PUBLISHERS NAME: VISICORP

**HARDWARE REQUIREMENTS:** operates calendar function with California Computer System Clock Calendar Module Model 7424 card and Mountain Computer Inc. CLOCK card.

**DESCRIPTION:** It helps you manage your time and information.

The VisiDex program makes it easy to organize your personal information and manage your valuable time.

It will enable you to file away any kind of information, and instantly recall it whenever you want. It will print out lists, notes and memos. And it will keep track of your daily calendar, and alert you to upcoming events.

The VisiDex program gives you total flexibility. No structured formats to bother with. File anything, any way you want to: names, addresses, new ideas, important numbers and dates, things-to-do lists, meeting notes, report highlights, tax and stock records - anything.

You can retrieve exactly what you want, in an instant, because the VisiDex program "thinks" the way you do: receiving information randomly and using it in different forms. It gives you unlimited cross-referencing, so you can find everything faster. It's like having "total recall," not just for one piece of information, but for every other related piece of data.

Say, for example, that a market planner received a new 1985 sales estimate for a competitor's product. He can store that information under specific "keywords" such as the product name, the competitor's name and others, as well as under general "keywords" such as sales forecasts and 1985. Later, when he needs that information, by simply typing any of those keywords he will see displayed that sales projection plus all other information stored under that keyword.

Ask your retail computer store dealer for a demonstration of how the VisiDex program can help you keep all the facts at your fingertips.

### VISIDEX FEATURES:

- \* Free-form or structured input with instant retrieval by keyword - or by non-keyword if you don't remember the keyword under which it is stored.

- \*You can cross-reference your information by keywords; for example, 36 6-letter keywords or 23 10-letter keywords - fewer if your keywords are longer, more if they're generally shorter.
  - \*VisiDex can display a summary calendar for any month between the years 1900 and 2000 - and highlight any memos you may have stored by date during that month.
  - \*You can have VisiDex automatically store its screens in a custom format by pre-set keywords, so that particular lists may be stored and retrieved simply and quickly.
  - \*Powerful on-screen editing commands allow you to rewrite or rearrange your text, then store it to the same or different keywords.
  - \*You can review on-screen information associated with one or more keywords.
  - \*Print individual items or an entire disk of information in the order you specify.
  - \*Place your text in inverse, flashing or normal (white-on-black) video for visual highlighting.
  - \*Keywords, phrases and dates are all designated with quick keystroke commands.
- PRICE: \$250.00**

## **TITLE: VISIFILE**

**PUBLISHERS NAME: VISICORP**

**HARDWARE REQUIREMENTS: Two drives and a printer recommended**

**DESCRIPTION:** VisiFile stores, searches, sorts, calculates, and prints reports and mailing labels, with the fewest possible keystrokes. And with its exclusive FlexFormat feature it adds the capability to easily change files as your information needs change.

You can use VisiFile to manage inventory or retail stock. Compute total value, print regular reports and select items below the re-order level. Use it also to maintain records on clients, sales, patients, or personnel, as well as social security numbers, insurance information, medications, salaries, hiring dates, and commissions. It can keep track of accounts receivable, select overdue accounts, and print a list in order of descending balance.

### **Features:**

-Exclusive FlexFormat feature allows you to automatically change any file's structure (for example, increasing the zip code from seven digits to nine) without re-entering existing data. Merge files, create new files from segments of other files, fabricate partial files for quicker data entry...all with no rekeying.

-"Moving cursor" menu displays directions for every function, making VisiFile simpler to learn and utilize. Similar to having an owner's manual on screen.

-Tabular and non-tabular reports with free form output can be printed with automatic printer. And the formats can be stored for later use. Print mailing labels, up to five labels across.

-Calculate formulas between fields with automatic recalculation if a number is changed.

-Sort up to 10 fields at a time, alphabetically or numerically, in ascending or descending order.

-Any data within a record meeting your specifications can be index searched in 3 seconds or less.

-All records of a file are stored on one disk, which will hold about 1,000 single page records. A file can store around 120,000 letters and numbers.

-Each record has a storage capacity of about 232 characters, which can be divided among up to 24 fields (line items). Maximum length of a numeric field is 38 characters. Print up to 255 characters/line.



**PRICE:**

**TITLE: Z65 DATA BASE PROCESSOR**

**PUBLISHERS NAME: MICRO DATA BASE SYSTEMS, INC.**

**DESCRIPTION:** Composed of both hardware and software: a Z80 cpu, a 6502-Z80 software interface, and a Z80 implementation of MDBS. It's a data base management system in the very sense of the word and should not be confused with ISAM or B-tree file managers. All application development is performed within Apple DOS using Applesoft BASIC. All data base manipulation however, is handled by the Z80 cpu, resulting in measurable speed increases relative to the 6502. And the Z65 software being just 20Kb, there is a notable expansion in the available memory for applications programs. This is a very small code size in relations to other genuine data base management systems (normally 50Kb to 500Kb). With the Z65, the user can utilize all of the data base management facilities of MDBS. MDBS is based on the innovative expanded network data model, whose features exceed those of the old relational, hierarchical and COLASYL network data models. The Z65 supports both a host language (Applesoft BASIC) interface and a query interface that permits ad hoc data retrieval with a single, English-like statement.

**PRICE:** Package complete with Z80 card through a single user license: \$1600.00

Without the Z80 cpu card, the Z65 software is: \$1500.00



## EVALUATION AND SELECTION OF EDUCATIONAL SOFTWARE

For educators who are contemplating a purchase of or are currently utilizing a microcomputer for educational purposes, here, following, is a general evaluation system of program rating criteria that can assist you in selecting software for your particular needs. Through publishing Software Directories, we at Vital Information Inc. have become very familiar with, what is called, "canned software" ready to run programs.

Canned software does not have a standard price range: it can cost anywhere from \$10. to \$1,000. Yet, cost as a criteria for evaluation, we have found, is not always indicative of the actual quality. Some of the lower priced software was shown to be as good if not better than the higher priced software. So, in order to accurately select your software, you should be well aware of your needs as to use rather than simply judge the product by the listed price. It will help if, as you are first looking through a selection, you ignore price altogether.

Canned software has the advantage of being ready to run, in some cases, easy to use, and cost efficient, though while available from most local computer stores or direct from the publisher, these programs cannot be modified, copied, or altered, nor returned after purchase. It is quite apparent that initial selection will be paramount in having a happy existence with your microcomputer equipment.

Suppliers for software packages and program varieties are ever increasing; so, you should find it most helpful to utilize the criterial guidelines listed below when selecting software for your needs.

Quite simply, the test of packaged software is: can it be easily understood; is the program content going to meet your application needs; is it easy to run; is it "Bug" free; is it well designed; and should something go wrong, does it allow for an easy recovery plan. Before purchasing any software, decide which of these areas are most important for you and your students. List the areas of major importance that the program should satisfy and that you are not willing to do without. The following provides some areas for evaluation when considering a software package purchase:

- A. Is the program designed for the appropriate age and ability group?
  - B. Is the program consistent with stated goals and objectives of the program?
  - C. Is it learner or machine controlled?
  - D. Are instructions and explanations clear and straight forward and is the presentation well designed?
  - E. Are the program responses appropriate and clear with the spelling and grammar correct?
  - F. Are learning objectives being followed?
  - G. Is the length of each section in the program suitable?
  - H. Can the student operate the program easily?
  - I. Where examples are provided, are the appropriate directions given?
  - J. Can you modify the presentation?
  - K. Is there rapid feedback?
  - L. Are positive responses reinforced?
  - M. Is good branching logic used?
  - N. Are suitable directions given for the student at the end of the program?
  - O. Does the program provide good error trapping?
  - P. Is documentation adequate?
- Of special interest, you should ask if supplemental materials

are provided in the package, such as instructional guides to provide information and materials to aid the instructor in implementing the program. If so, can they be used for individual educational plans and are the instructions complete and easy to understand.

Special features you might want to watch for:

Graphics: are they of good clear quality and in sufficient quantity to effectively enhance the lesson;

Sound: is it used in reinforcing specific areas to provide for more effective attention to an retention of key points;

Specialty items: does the program provide for speech synthesis, music synthesis, voice recognition, light pens, graphic tablets, etc.

#### CONCLUSION:

In order to select the right software or your CAI needs, much time and effort will have to be spent. In the long run, this will be time well spent, resulting in packages that will provide you and your students numerous hours of trouble free, unique experiences which will aid in the expansion of the educational environment of your class.

\* Microcomputer Software and Information for Teachers (MicroSIFT), Northwest Regional Educational Laboratory, 300 S.W. Sixth Ave., Portland, OR 97204. Funded by the National Institute of Education, MicroSift is a clearinghouse for K-12 software reviews and information.

\* Minnesota Educational Computing Consortium (MECC), User Services, 2520 Broadway Dr., Saint Paul, MN 55113. Coordinates the state's educational computing efforts, provides inservice training in instructional computing and management information systems, develops and sells software for Apple and Atari computers, and publishes a newsletter.

\* The North Carolina Instructional Computing Project, 116 W. Edenton St., Rm. 50, State Dept. of Education, Raleigh, NC 27611. Provides inservice sessions on microcomputer awareness for teachers, administrators and consultants, and reviews selected software.

\* Northwest Council for Computer Education, Computer Center, Eastern Oregon State College, La Grande, OR 97850. Serves educators from Oregon and Washington with meetings, workshops and an annual conference.

\* Society of Data Educators, 983 Fairmeadow Rd., Memphis, TN 38117. Serves teachers and librarians who are interested in data education and provides continuing education programs. Publishes Journal of Data Education.

\* Technology and Basic Skills in Mathematics (TABS-Math), College of Education, Arps Hall 273, Ohio State University, Columbus, OH 43210. Funded by the U.S. Dept. of Education, TABSA provides instructional courseware, inservice workshops, teacher manuals and student support materials. The project is also developing computer and videodisk based curricular materials for children in grades 5-8.

\* Texas Computer Education Association, 7131 Midbury, Dallas, TX 75230. Encourages interest in computer education; provides information about current trends, serves as a link to other computer organizations; and supports conferences, a software exchange and a newsletter.

\* Alaska Association for Computers in Education (AACE)

Contact: Norman D. Holthouse, President  
1002 Hillcrest Drive, Anchorage, AL 99503

Computer Education Society of Ireland

Contact: Mary A. Sheeham

Mt. Anville Secondary School, Goatstown, Dublin 14, Ireland

Computers. Learners, Users, Educators Association (CLUES)

Contact: Henry J. Peterson, Executive Director

50 Nellis Drive, Wayne, New Jersey 07470

Computer-Using Educators (California)

Contact: Don McKell

Independence High School, San Jose, CA 95133

DIDACOM

Contact: Inno Broekman

Avenbeek 90, 2182 RZ Hillegom, The Netherlands

Educational Computing Organization of Ontario (ECOO)

Contact: Robert E. Drake, President

252 Bloor Street West, Toronto, Ontario M5S 1V6

(This organization has absorbed the Ontario Society for Microcomputers in Educations.)

Educators Interest Group of the San Diego Computer Society

Contact: Melvin L. Zeddies

P.O. Box 81537, San Diego, CA 92138

Illinois Association for Educational Data Systems (ILEADS)

Contact: Lyle B. Smith, President

Computer Science Department, Northern Illinois University,

De Kalb, IL 60115

Indiana Computer Educators

Contact: David A. Flowers

Ft. Wayne Community Schools, Adm., Cwt., 1230 So. Clinton St.,  
Ft. Wayne, IN 46802

New Hampshire Association for Computer Education Statewide  
(NHACES)

Contact: Anne Knight, Acting President

University of New Hampshire, Computer Science, Durham, NH  
03824

Minnesota Association for Educational Data Systems

Contact: Kenneth Brumbaugh

1925 W. Country Rd. B2, St. Paul, MN 55113

Northwest Council for Computers in Education (Oregon and  
Washington)

Contact: Howard Bailey

Computing Center, Eastern Oregon State College, Le Grande, OR  
97850

Saskatchewan Association for Computers in Education

Contact: Duncan Campbell

Mt. Royal Collegiate, 2220 Rusholme Road, Saskatoon,  
Saskatchewan S7L 4A4

Texas Computer Education Association

Contact: Vicki S. Smith

7131 Midbury, Dallas, Texas 75230



# EDUCATION

## ADMINISTRATION AND COUNSELLING

A.E.N. GRADING SYSTEM	ED-1
ADIVSOR'S AID	ED-1
ADMINISTRATIVE SOFTWARE	ED-1
ASSISTANT PRINCIPAL	ED-1
ATTENDANCE	ED-2
ATTENDANCE REPORTING SYSTEM	ED-2
AVICULTURIST III	ED-2
BLOCKS LESSON SAMPLER	ED-2
BURSAR - STUDENT ACTIVITY FUND ACCOUNTING SYSTEM	ED-2
CURRICULUM MANAGEMENT SYSTEM	ED-3
CLASS	ED-3
CLASS SCHEDULING PROGRAM	ED-4
COMPETENCY EXAM PREPARATION SERIES	ED-4
COMPETENCY MANAGER	ED-5
COMPOSITION CORRECTING PACKAGE	ED-5
COMPU-GRADE: TEACHER'S GRADEBOOK PROGRAMS	ED-5
COURSE HISTORY SYSTEM	ED-6
CURRICULUM DESCRIPTION	ED-6
DAILY ATTENDANCE ACCOUNTING PACKAGE	ED-7
ELECTRIC GRADEBOOK	ED-7
EQUIP - SCHOOL EQUIPMENT INVENTORY SYSTEM	ED-7
FIELD TRIP LIST	ED-8
GRADEBOOK	ED-8
GRADING SYSTEM PROGRAMS	ED-8
GRADUATE RECORD EXAMS	ED-9
HONOR ROLL SORT	ED-9
PARENT REPORTING	ED-9
PERIOD ATTENDANCE SYSTEM	ED-9
PLACEMENT TEST FOR PAL	ED-10
PROJECT ATTEND	ED-10
PROJECT BASIC	ED-11
PROJECT I.E.P.	ED-11
PROJECT TEST	ED-12
PURCHASE - ANNUAL SCHOOL PURCHASING SYSTEM	ED-12
REGISTRAR	ED-13
REGISTRATION	ED-13
SCHEDULING PACKAGE	ED-13
SCORE: THE ACADEMIC ASSISTANT	ED-14
SEATING CHART	ED-14
SMALL GROUP ROSTER	ED-14
SPECIAL REPORT TO PARENTS	ED-14
TEACHERS' GRADEBOOK	ED-14
THE APPLE GRADE BOOK	ED-15
THE CURRICULUM MANAGER	ED-15
THE GRADER	ED-15
THE INSTRUCTOR	ED-16
THE TEACHING MACHINE	ED-16
THE U.S. CONSTITUTION TUTOR	ED-17
UNICOM EDUCATIONAL MANAGEMENT SERIES	ED-17

## COMPUTER AIDED/ASSISTED INSTRUCTION

+ASSEMBLER TEACHER	ED-19
ANT FARM	ED-19
APPLE COMMUNICATOR	ED-19
APPLE FLASH (TM)	ED-19
APPLE SEED	ED-19
APPLE SUPERPILOT	ED-20
APPLE TEACHER	ED-22
ARISTOTLE'S APPLE	ED-22

BASIC PROGRAMMING . . . . .	ED-22
BUMBLE GAMES . . . . .	ED-22
BUMBLE PLOT . . . . .	ED-22
COMPUTER ASSISTED TELEVISION INSTRUCTION (CATI) . . . . .	ED-23
COMPUTER AWARENESS . . . . .	ED-24
COMPUTER DISCOVERY PROGRAM . . . . .	ED-24
CREATE SKILLS - INTERMEDIATE . . . . .	ED-25
E-Z PILOT . . . . .	ED-25
EARLY ELEMENTARY I . . . . .	ED-25
EARLY ELEMENTARY II . . . . .	ED-25
EDUCATION DEMO . . . . .	ED-26
EDUCATIONAL COURSEWARE FOR THE APPLE . . . . .	ED-26
EUREKA LEARNING SYSTEM . . . . .	ED-27
EXPERIENCING BASIC DUPLICATING MASTERS NO. 7412 . . . . .	ED-27
EXPERIENCING BASIC TASK CARDS NO. 7396 . . . . .	ED-27
FACTORING . . . . .	ED-27
GERTRUDE'S PUZZLES . . . . .	ED-28
GERTRUDE'S SECRETS . . . . .	ED-28
HAND/EYE COORDINATION . . . . .	ED-28
HOW TO OPERATE THE APPLE II PLUS . . . . .	ED-29
I SPEAK BASIC: A COMPUTER LITERACY PACKAGE . . . . .	ET-29
INTRODUCTION TO COMPUTERS . . . . .	ED-30
INTRODUCTION TO MICROCOMPUTERS . . . . .	ED-30
JUGGLES' RAINBOW . . . . .	ED-30
LESSON-TUTORGRAPHS . . . . .	ED-31
LOGO . . . . .	ED-31
LOGO LANGUAGE FOR THE APPLE II . . . . .	ED-33
MASTERING THE PARTS OF SPEECH . . . . .	ED-34
MICROCOMPUTER USE & SOFTWARE DESIGN No. 7884 . . . . .	ED-34
MICROCOMPUTER WORKBOOK COURSEWARE/SOFTWARE . . . . .	ED-34
OMNISCAN LASER VIDEODISC INTERFACE . . . . .	ED-35
PAL . . . . .	ED-35
PASS . . . . .	ED-36
POLY-CHOICE . . . . .	ED-37
POTPOURRI . . . . .	ED-38
PROGRAMMER . . . . .	ED-38
PROGRAMMER PLUS . . . . .	ED-38
QUESTION & ANSWER GROUP . . . . .	ED-38
RELIABILITY TEST . . . . .	ED-38
ROCKY'S BOOTS . . . . .	ED-39
SAMP . . . . .	ED-39
SCHOOL DAYS . . . . .	ED-40
SCHOOLHOUSE I . . . . .	ED-40
SCOTT'S VOICE BASED LEARNING . . . . .	ED-41
SIMULATED COMPUTER . . . . .	ED-42
STUDY QUIZ FILES (SQF) . . . . .	ED-42
SUPERPILOT . . . . .	ED-42
SURFACE FOR THE APPLE II . . . . .	ED-43
SYSTEMS ANALYST . . . . .	ED-44
TEACHER CREATE SERIES . . . . .	ED-44
TEACHERS' AIDE I AND II . . . . .	ED-45
THE ADAPTABLE SKELETON . . . . .	ED-45
THE CLASSROOM MONITOR . . . . .	ED-45
THE ELECTRONIC TOOL . . . . .	ED-46
THE GAME SHOW . . . . .	ED-46
THE GHOSTWRITER AUTHORIZING SYSTEM . . . . .	ED-47
THE LEARNING BOX . . . . .	ED-47
THE LEARNING SYSTEM . . . . .	ED-48
THE MICROCOMPUTER AS A TEACHER TOOL . . . . .	ED-48
THE NEW STEP BY STEP . . . . .	ED-48
THE PROFESSIONAL INFORMATION MANAGER . . . . .	ED-49
THE PROFESSOR . . . . .	ED-49
THE TERRAPIN TURTLE . . . . .	ED-49
THE TEST WRITER . . . . .	ED-50

TYPING TEACHER . . . . .	ED-51
VOTER 30 . . . . .	ED-51
WILL 'O THE WISP . . . . .	ED-51
Z.E.S. SYSTEM OF COMPUTER AIDED INSTRUCTION . . . . .	ED-51

# ENGLISH/GRAMMAR

A2-ED1 WHOLE BRAIN SPELLING . . . . .	ED-53
ABC . . . . .	ED-53
ADVERBS . . . . .	ED-53
ALEXANDER THE GREAT . . . . .	ED-53
ALPHABETIZE . . . . .	ED-53
ALPHABETTA . . . . .	FD-54
ANAGRAMS I (RECREATIONAL 1) . . . . .	ED-54
BASIC READING SKILLS . . . . .	ED-54
CODE BREAKER . . . . .	ED-55
COLOR GUESS . . . . .	ED-55
COMMAS . . . . .	ED-55
COMPREHENSION POWER PROGRAM . . . . .	ED-56
CONJUNCTIONS . . . . .	ED-56
CRITICAL READING . . . . .	FD-56
EARLY WORDS . . . . .	ED-57
ENGLISH AS A SECOND LANGUAGE . . . . .	FD-58
ENGLISH GRAMMAR . . . . .	ED-58
FACT FUN . . . . .	ED-58
FRY READABILITY PROGRAM . . . . .	ED-58
GAME OF HARD/SOFT CONSONANTS . . . . .	ED-58
GAME OF SYNONYMS AND ANTONYMS . . . . .	ED-58
GAME POWER FOR PHONICS . . . . .	FD-58
GRAMMAR PROBLEMS FOR PRACTICE - HOMONYMS . . . . .	ED-59
GRAMMAR PROBLEMS FOR PRACTICE - MODIFIERS . . . . .	ED-59
GRAMMAR PROBLEMS FOR PRACTICE - PRONOUNS . . . . .	ED-59
GRAMMAR PROBLEMS FOR PRACTICE - SPELLING . . . . .	ED-60
GRAMMAR PROBLEMS FOR PRACTICE - VERBS . . . . .	ED-60
HOMONYMS . . . . .	ED-60
JABBERWOCKY . . . . .	ED-60
LANGUAGE READING DEVELOPMENT . . . . .	ED-60
MAGIC SPELLS . . . . .	ED-61
MONTY (TM) PLAYS SCRABBLE . . . . .	ED-61
MYSTERY WORD . . . . .	ED-61
NOUNS . . . . .	FD-61
OPPOSITES . . . . .	ED-62
PHRASES AND CLAUSES . . . . .	FD-62
POETRY . . . . .	ED-62
PREPOSITIONS . . . . .	ED-62
PRONOUNS . . . . .	ED-62
PUNCTUATION SKILLS: COMMAS NO. 7879 . . . . .	ED-63
PUNCTUATION SKILLS: END MARKS, SEMICOLON, COLON NO. 7880 . . . . .	ED-64
QUESTIONS & STORY . . . . .	FD-65
READING COMPREHENSION - LEVEL D (READING LEVEL 4) . . . . .	ED-65
READING LEVEL . . . . .	ED-66
READINGS IN LITERATURE . . . . .	ED-66
ROOTS/AFFIXES . . . . .	FD-67
SENTENCE DIAGRAMMING . . . . .	ED-67
SPEED READER . . . . .	ED-68
SPELLING BEE . . . . .	ED-68
SPELLING BEE WITH READING PRIMER . . . . .	ED-68
SPELLING I . . . . .	ED-68
SPELLING II . . . . .	ED-69
STORY TIME AND DON'T FALL . . . . .	ED-69
STUDENT WORD STUDY . . . . .	ED-69
SUPER SPELLER . . . . .	ED-70
SYLLABICATION . . . . .	ED-70
SYLLABICATION TUTORIAL . . . . .	ED-70

SYLLABLE COUNT . . . . .	ED-70
TESTING SERIES . . . . .	ED-70
THE ANSWER FILE . . . . .	ED-70
THE ENGLISH SAT 1 . . . . .	ED-71
THE MICRO-EDUCATIONAL TEACHING SYSTEM I . . . . .	ED-71
THE VOCABULARY GAME . . . . .	ED-71
TRUE OR FALSE SYLLABICATIONS . . . . .	ED-72
U-SPELL . . . . .	ED-72
VERB USAGE 1 & 2 . . . . .	ED-72
VERBS I . . . . .	ED-73
VERBS II . . . . .	ED-73
VERBS III . . . . .	ED-73
VOCAB . . . . .	ED-74
VOCABULARY QUIZ . . . . .	ED-74
VOCABULARY SKILLS: PREFIXES, SUFFIXES, ROOT WORDS No. . . . .	ED-74
VOCABULARY SKILLS: CONTEXT CLUES NO. 7881 . . . . .	ED-76
VOWEL EXERCISE . . . . .	ED-77
WORD ANALOGY . . . . .	ED-77
WORD BREAK UP . . . . .	ED-77
WORD GAMES . . . . .	ED-77
WORD PREP (BASIC) - VOCABULARY DRILL . . . . .	ED-77
WORD PREP-ADVANCED . . . . .	ED-78
WORD RECOGNITION BUILDER . . . . .	ED-78
WORD SKILLS 1: PREFIXES . . . . .	ED-78
WORD STRUCTURE . . . . .	ED-78
WORD-A-TACH . . . . .	ED-79
WORDSKILL FOR THE MICROCOMPUTER - GRADES 7-ADULT . . . . .	ED-79
WORDY . . . . .	ED-80

## FOREIGN LANGUAGES

ALICIA- A BILINGUAL READER . . . . .	ED-81
ASTRO WORD SEARCH: FRENCH . . . . .	ED-81
CHINESE LESSONS . . . . .	ED-81
FOREIGN LANGUAGE VOCABULARY DRILL . . . . .	ED-81
FOREIGN/ENGLISH . . . . .	ED-81
GERMAN VOCABULARY DRILL . . . . .	ED-81
HEBREW II . . . . .	ED-82
HEBREW II PLUS . . . . .	ED-82
LANGUAGE SKILLS . . . . .	ED-82
MALUM II...IMPERIAL ROMAN PROGRAMMABLE COMPUTER . . . . .	ED-82
MICRO-DEUTSCH . . . . .	ED-82
THE LINGUIST . . . . .	ED-82
VOCABULARY PROMPTER . . . . .	ED-83

## GRAPHICS

VIDEO LOOM II . . . . .	ED-85
APPILOT II EDU-DISK . . . . .	ED-86
E-Z-GRAF . . . . .	ED-86
TURTLE . . . . .	ED-86

## LIBRARY SCIENCE

LEARNING ABOUT CATALOG CARDS . . . . .	ED-87
LEARNING TO LOCATE BOOKS ON THE SHELF . . . . .	ED-87
LEARNING TO UNDERSTAND THE CARD CATALOG . . . . .	ED-87
LEARNING TO UNDERSTAND THE TITLE PAGE . . . . .	ED-87
LEARNING TO USE AN INDEX . . . . .	ED-87
LEARNING TO USE THE TABLE OF CONTENTS . . . . .	ED-87
LIBRARY SKILLS . . . . .	ED-88
OVERDUE BOOKS PROGRAM . . . . .	ED-88
THE LIBRARIAN (VERSION 2) . . . . .	ED-88



# MATHEMATICS

A COMPUTER LABORATORY MANUAL FOR NUMBER THEORY . . . . .	ED-90
ADDITION AND SUBTRACTION . . . . .	ED-90
ALGEBRA DRILL AND PRACTICE . . . . .	ED-90
ALIEN ADDITION . . . . .	ED-91
ALLIGATOR MIX . . . . .	ED-92
ANALOGIES . . . . .	ED-92
ARCADEMIC SKILL BUILDERS . . . . .	ED-92
AREA UNDER A CURVE . . . . .	ED-92
ARITHMETIC OF FUNCTIONS . . . . .	ED-93
BASIC MATH SKILL GAMES . . . . .	ED-93
BASIC MATH SYSTEM H . . . . .	ED-93
BINOMIAL MULTIPLICATION . . . . .	ED-94
CHECKS AND BALANCES . . . . .	ED-94
COMPU-MATH I . . . . .	ED-94
COMPUTER GRAPHING EXPERIMENTS- VOLUME 1 . . . . .	ED-94
COMPUTER GRAPHING EXPERIMENTS- VOLUME 2 . . . . .	ED-95
COMPUTER GRAPHING EXPERIMENTS- VOLUME 3 . . . . .	ED-95
COMPUTER MATH GAMES, VOLUME 1 . . . . .	ED-95
COMPUTER MATH GAMES, VOLUME 2 . . . . .	ED-95
COMPUTER MATH GAMES, VOLUME 3 . . . . .	ED-95
COMPUTER MATH GAMES, VOLUME 4 . . . . .	ED-96
COMPUTER MATH GAMES, VOLUME 5 . . . . .	ED-96
CONTROL SYSTEM DESIGNER . . . . .	ED-96
COUNT AND ADD (GRADES K-2) . . . . .	ED-97
COUNTING BEE . . . . .	ED-97
DECIMAL SKILLS NO. 7878 . . . . .	ED-97
DECIMALS & PERCENTS . . . . .	ED-98
DEMOLITION DIVISION . . . . .	ED-98
DIPT - DELUSIONS, ILLUSIONS, PUZZLES & TRICKS . . . . .	ED-98
DIVISION FACTS . . . . .	ED-99
DIVISION SKILLS NO. 7883 . . . . .	ED-99
DRAGON MIX . . . . .	ED-99
ECCENTRICITY FORM OF A CONIC . . . . .	ED-100
ELEMENTARY MATH EDU-DISK . . . . .	ED-100
ELEMENTARY MATH PACKAGE I . . . . .	ED-100
ELEMENTARY MATH PACKAGE II . . . . .	ED-101
ELEMENTARY NUMERICAL TECHNIQUES FOR ORDINARY DIFFERENTIAL . . . . .	ED-101
ESSENTIAL MATHEMATICS! . . . . .	ED-101
EXPANDED NOTATION . . . . .	ED-102
EXPLORATORY DATA ANALYSIS . . . . .	ED-102
FACT SHEETS . . . . .	ED-103
FACTORING WHOLE NUMBERS . . . . .	ED-104
FRAC-DEC-PERCENT . . . . .	ED-104
FRACTION RECOGNITION . . . . .	ED-104
FRACTIONS . . . . .	ED-104
FRACTIONS . . . . .	ED-105
GOING TOGETHER - SCATTERPLOTS & CORRELATION COEFFICIENTS . . . . .	ED-105
GUESS THE NUMBER . . . . .	ED-105
GUESS THE RULE . . . . .	ED-106
INTERMEDIATE MULTIPLICATION AND DIVISION . . . . .	ED-106
INVADER ROUND UP . . . . .	ED-106
JUNIOR HIGH MATH DISK . . . . .	ED-106
LAZER CHASER . . . . .	ED-107
LIMITS OF SEQUENCES . . . . .	ED-107
MAT MAN . . . . .	ED-108
MATCHING AND USING NUMBERS . . . . .	ED-108
MATCHING GEOMETRIC FIGURES . . . . .	ED-108
MATH FACTS GAMES-1 . . . . .	ED-109
MATH I . . . . .	ED-109
MATH II . . . . .	ED-109
MATH SOFTWARE . . . . .	ED-109
MATH STRATEGY . . . . .	ED-109

MATH WORD PROBLEMS . . . . .	ED-110
MATHEMATICS . . . . .	ED-111
MATHEMATICS PACKAGE Grades 1 to 8 . . . . .	ED-112
MATHEMATICS SERIES . . . . .	ED-112
MATHGRID . . . . .	ED-113
MEASUREMENT I . . . . .	ED-113
METEOR MULTIPLICATION . . . . .	ED-113
MIDPOINT RULE AND TRAPEZOIDAL RULE . . . . .	ED-113
MINUS MISSION . . . . .	ED-114
MIXED NUMBER RECOGNITION . . . . .	ED-114
MIXED NUMBERS NO. 7877 . . . . .	ED-114
MONEY . . . . .	ED-115
MONEY! MONEY! . . . . .	ED-115
MULT FACTS . . . . .	ED-115
MULTIPLICATION & DIVISION FUN . . . . .	ED-115
MULTIPLICATION AND DIVISION . . . . .	ED-116
MULTIPLICATION FACTS DIAGNOSTIC . . . . .	ED-116
MYSTERY FUNCTION . . . . .	ED-116
NUMBER LINE . . . . .	ED-116
ON THE AVERAGE - MEASURES OF CENTRAL TENDENCY . . . . .	ED-117
PERCENT PROBLEMS . . . . .	ED-117
PLOT . . . . .	ED-117
PLOTTING GRAPHS FOR LINE PRINTER . . . . .	ED-117
PLOTTING GRAPHS FOR VIDEO DISPLAY . . . . .	ED-118
POLY MAN . . . . .	ED-118
PRIMARY MATH WORKSHEET . . . . .	ED-118
PROBLEM SOLVING . . . . .	ED-118
PROBLEM SOLVING IN EVERYDAY MATH . . . . .	ED-118
PROOFS & PROPERTIES . . . . .	ED-119
PYTHAGORAS AND THE DRAGON . . . . .	ED-119
PYTHAGOREAN PROOFS - PROPOSITION 47, BOOK I, EUCLID . . . . .	ED-119
RATIONAL FUNCTION GRAPHER . . . . .	ED-120
REVERSE . . . . .	ED-120
SETS . . . . .	ED-120
SIMPLE MULTIPLICATION AND DIVISION . . . . .	ED-120
SOCCKER MATH . . . . .	ED-120
SOLIDS OF REVOLUTION . . . . .	ED-121
SPACE MOUSE . . . . .	ED-121
SPACE SCANNER . . . . .	ED-121
SPEED DRILL . . . . .	ED-121
STAT POWER . . . . .	ED-122
SURFACES FOR MULTIVARIABLE CALCULUS . . . . .	ED-122
TAYLOR'S SERIES APPROXIMATIONS . . . . .	ED-124
TEDDY BEAR'S COUNTING FUN . . . . .	ED-124
THE BIG MATH ATTACK . . . . .	ED-125
THE REAL NUMBER SYSTEM . . . . .	ED-125
THE RIEMANN INTEGRAL - FINDING THE AREA UNDER A CURVE . . . . .	ED-125
THE STORE THAT TEACHES . . . . .	ED-125
USING A CALENDAR . . . . .	ED-126
VECTOR SUM . . . . .	ED-126
WHOLE NUMBERS . . . . .	ED-126

# MISCELLANEOUS

32 BASIC PROGRAMS . . . . .	ED-127
A MEMORY MYTH . . . . .	ED-127
ADVERTISING TECHNIQUES . . . . .	ED-127
AROUND THE BALL PARK . . . . .	ED-127
ASTRO QUOTEC . . . . .	ED-127
AUTO ATLAS . . . . .	ED-128
BEAT THE CLOCK . . . . .	ED-128
BIOBITS I: LIFE . . . . .	ED-128
CAI MANAGER . . . . .	ED-129
CROSSWORD MAGIC . . . . .	ED-129

DISK PAK I . . . . .	ED-130
EDUCATORS DISK SPECIAL . . . . .	ED-130
GRAPPLING . . . . .	ED-131
ICAN . . . . .	ED-131
MATH STRATEGY AND SPELLING STRATEGY . . . . .	ED-131
MIND-MEMORY IMPROVEMENT COURSE-STEP 1 . . . . .	ED-132
MIND-MEMORY IMPROVEMENT COURSE-STEP 2 . . . . .	ED-132
MOPTOWN . . . . .	ED-132
NOVELTIES . . . . .	ED-132
PUZZLER . . . . .	ED-132
QUICK & EASY DATA MASTER . . . . .	ED-132
QUIZ MASTER - MOVIE TRIVIA & COMPUTER TERMINOLOGY . . . . .	ED-133
SCIENTIFIC & GAMES . . . . .	ED-134
SUBJECT DATA TAPES/FILES . . . . .	ED-134
THE MOSTLY BASIC EDUCATIONAL PROGRAM PACKAGE . . . . .	ED-134
THE RESPONSIBILITY LIFE DYNAMIC . . . . .	ED-135
THE SHELL GAMES . . . . .	ED-135

## MUSIC

ARNOLD . . . . .	ED-137
AUTO DIGISONG PLAYER . . . . .	ED-137
BASIC EAR- TRAINING SKILLS . . . . .	ED-137
CHORD MANIA . . . . .	ED-137
DOREMI . . . . .	ED-137
ENVELOPE CONSTRUCTION . . . . .	ED-137
ENVELOPE SHARPER . . . . .	ED-138
EXPERIMENTER'S PACKAGE . . . . .	ED-138
FIND THE KEY . . . . .	ED-138
HARMONY DRILLS: SET 1 . . . . .	ED-138
INTERVAL MANIA . . . . .	ED-138
KEY SIGNATURE DRILLS . . . . .	ED-138
MAKE A TUNE . . . . .	ED-139
MARCHING BAND DATABASE . . . . .	ED-139
MELODIOUS DICTATOR . . . . .	ED-139
MICRO MUSIC DIGISONG PAKS . . . . .	ED-139
MODE DRILLS . . . . .	ED-139
MUSIC COMPOSER . . . . .	ED-139
MUSIC IN THEORY AND PRACTICE . . . . .	ED-140
MUSICAL STAFF DRILL . . . . .	ED-140
MUSICMASTER . . . . .	ED-140
MUSICTUTOR . . . . .	ED-142
NOTES . . . . .	ED-142
PIANO KEYBOARD DRILL . . . . .	ED-142
PITCH DRILLS WITH ACCIDENTALS . . . . .	ED-143
PITCH DRILLS WITHOUT ACCIDENTALS . . . . .	ED-143
PROCESS & OTHER PROGRAMS . . . . .	ED-143
RHYTHMIC DICTATOR . . . . .	ED-143
SIR WILLIAM WRONG NOTE . . . . .	ED-143

## SCIENCE

ADVANCED PHYSICS . . . . .	ED-144
ALMANAC . . . . .	ED-144
ANATOMY QUIZ . . . . .	ED-144
ASTRONOMY . . . . .	ED-144
ASTRONOMY 1- INTRODUCTION TO STARS . . . . .	ED-145
AVICULTURIST I . . . . .	ED-145
AVICULTURIST II . . . . .	ED-145
AVICULTURIST IV . . . . .	ED-145
AVICULTURIST: LIQUID & GAS FLOW CALCULATION . . . . .	ED-145
BALANCING MOLECULES . . . . .	ED-146
BASIC ELECTRICITY . . . . .	ED-146
BIOBITS II: MAGIC . . . . .	ED-146

BIOBITS III: GROWTH . . . . .	ED-146
BIOBITS IV: INTERACTIONS . . . . .	ED-147
BIOBITS V: PROFILE . . . . .	ED-148
BIOBITS VI: EVOLUTION . . . . .	ED-148
BIOBITS VII: NUCLEIC ACID CONNECTION . . . . .	ED-149
BIOLOGY . . . . .	ED-150
CELLM . . . . .	ED-150
CHEM LAB SIMULATIONS 3: CALORIMETRY . . . . .	ED-150
CHEM LAB SIMULATIONS 4: THERMODYNAMICS . . . . .	ED-151
CHEMICAL SYMBOLS . . . . .	ED-151
CHEMISTRY . . . . .	ED-151
CHEMISTRY II DISK . . . . .	ED-152
COMMUNICATIONS . . . . .	ED-152
COMPTROL LINEAR ACCELERATION . . . . .	ED-152
COMPTROL PACKAGE . . . . .	ED-153
COMPTROL PENDULUM . . . . .	ED-153
DENSITY LAB . . . . .	ED-153
DESCRIPTIVE STATISTICS . . . . .	ED-153
EDUCATIONAL PROGRAMS . . . . .	ED-154
EDUTECH SAMPLER . . . . .	ED-154
ELECTRIC FIELD . . . . .	ED-155
ELEMENTS & SYMBOLS . . . . .	ED-155
FUNDAMENTAL SKILLS FOR GENERAL CHEMISTRY . . . . .	ED-155
GAS LAWS . . . . .	ED-155
GEOMETRICAL OPTICS . . . . .	ED-156
GRAPHS . . . . .	ED-156
HARMONIC MOTION WORKSHOP . . . . .	ED-156
INSECTS . . . . .	ED-156
INTERP-WAVE SUPERPOSITION . . . . .	ED-156
INTRODUCTION TO ORGANIC CHEMISTRY . . . . .	ED-157
INTRODUCTORY MECHANICS FOR THE APPLE II . . . . .	ED-158
INTROSTAT . . . . .	ED-159
LAB PLOT . . . . .	ED-159
LIVING THINGS . . . . .	ED-160
MECHANICS . . . . .	ED-160
MECHANICS AND MOTION . . . . .	ED-160
MENDELIAN GENETICS ("GENIE") . . . . .	ED-160
METRI-VERT . . . . .	ED-161
MILLIKAN . . . . .	ED-161
NEWTON - SATELLITE ORBITS . . . . .	ED-161
NONCONSTANT ACCELERATION . . . . .	ED-162
OPTICS, WAVE MOTION, AND ELECTRICITY . . . . .	ED-162
ORBITING AND ROTATING FIGURES . . . . .	ED-162
ORDERIDENT . . . . .	ED-162
ORGANIC CHEMISTRY . . . . .	ED-163
ORGANIC NOMENCLATURE . . . . .	ED-163
OUR BODIES . . . . .	ED-163
PARABOLIC MOTION . . . . .	ED-164
PHMETER/SPECTRO/WHEATSTONE . . . . .	ED-164
PHYSICS . . . . .	ED-164
PHYSICS - FREE FALL . . . . .	ED-164
PHYSICS DEMOS PACKAGE . . . . .	ED-164
PHYSICS DEMOS SET . . . . .	ED-165
PHYSICS I DISK . . . . .	ED-165
PHYSICS II DISK . . . . .	ED-165
PLANETARY MOTION . . . . .	ED-166
QUAL . . . . .	ED-167
QUALITATIVE ORGANIC ANALYSIS . . . . .	ED-167
QUANTUM ATOM AND SINE WAVES . . . . .	ED-167
SATELLITE TRACKING SOFTWARE . . . . .	ED-167
SCATTER - PARTICLES SCATTERING . . . . .	ED-168
SCIENCE . . . . .	ED-168
SCIENCE LAB DATABASE . . . . .	ED-168
SCIENTIFIC MEASUREMENTS . . . . .	ED-169



SIMPLE MACHINES . . . . .	FD-169
SOUND . . . . .	ED-169
STATISTICS . . . . .	ED-170
TARGET . . . . .	ED-170
TELLING TIME . . . . .	ED-170
TELLSTAR . . . . .	ED-170
THE EARTH AND ITS COMPOSITION . . . . .	ED-171
THE MOSTLY BASIC SCIENTIFIC PROGRAM PACKAGE . . . . .	ED-171
THE PLANETARY GUIDE . . . . .	ED-172
THE SOLAR SYSTEM . . . . .	ED-172
THREE BODY ORBITS . . . . .	ED-172
TIME/RATE/DISTANCE . . . . .	ED-172
TITRATION . . . . .	ED-172
TWO POPULATIONS . . . . .	ED-173
VECTORS . . . . .	ED-173
WAVE MOTION . . . . .	ED-173
WEATHER FRONTS . . . . .	ED-173
WEATHER- A LESSON-TUTORGRAPH . . . . .	ED-173
ZEBRA FINCH GENETICS . . . . .	ED-173

## SOCIAL STUDIES

AKAN . . . . .	ED-174
AMERICAN HISTORY THROUGH BIOGRAPHIES . . . . .	ED-174
AMERICAN INDIANS . . . . .	ED-174
CAI PROGRAM VOLUME II . . . . .	ED-174
CAI PROGRAMS VOLUME I . . . . .	ED-174
COMPUTER LAB IN MEMORY AND COGNITION . . . . .	ED-174
DEMO-GRAPHICS . . . . .	ED-176
EARLY CIVILIZATION . . . . .	ED-178
ECOLOGICAL MODELING . . . . .	ED-178
ECOLOGY SIMULATIONS 1 . . . . .	ED-179
ELECTORAL COLLEGE . . . . .	ED-180
HAIL TO THE CHIEF . . . . .	ED-180
HISTORY AND GEOGRAPHY PACKAGE . . . . .	ED-180
HOLIDAYS AND FESTIVALS . . . . .	ED-181
MEDALIST-CONTINENTS . . . . .	ED-181
MEDALIST-PRESIDENTS . . . . .	ED-181
MEDALIST-STATES . . . . .	ED-181
MEET THE PRESIDENTS . . . . .	ED-181
POPULATION . . . . .	ED-182
PRESIDENT ELECT . . . . .	ED-182
SEX ROLE . . . . .	ED-182
SHORE FEATURES- A LESSON-TUTORGRAPH . . . . .	ED-182
SOCIAL AND ECONOMIC SIMULATIONS . . . . .	ED-182
SOCIAL STUDIES . . . . .	ED-183
STATES OF THE UNITED STATES . . . . .	ED-183
THE ALIVENESS LIFE DYNAMIC . . . . .	ED-183
THE CONDITIONING LIFE DYNAMIC . . . . .	ED-183
THE ENVIRONMENT LIFE DYNAMIC . . . . .	ED-183
THE LIFE DYNAMIC TRANSFORMATION EXPERIENCE . . . . .	ED-184
THE MIDDLE AGES . . . . .	ED-184
THE RELATIONSHIP LIFE DYNAMIC . . . . .	ED-184
TRANSPORTATION . . . . .	ED-184
TRUCKER AND STREETS OF THE CITY . . . . .	ED-184
WORLD AND STATE CAPITALS . . . . .	ED-185
WORLD CLOCK . . . . .	ED-185
WORLD POLAR/DESERT REGIONS . . . . .	ED-185

## ADMINISTRATION AND COUNSELLING

### **TITLE: A.E.N. GRADING SYSTEM**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

#### **DESCRIPTION:**

- \* Functions as a gradebook, only all grading, calculations and alphabetizing is done by the system
- \* May be used with either number grades or any of 3 types of letter grade systems
- \* Reports may be of 1 student, many students, categories of students, or many classes combined
- \* Demos included
- \* Manual and tutorial sheet included
- \* Some of the many programs are:  
BEGIN QUARTER/SEMESTER; GRADING; CHANGE ASSIGNMENTS; ADD NEW SCORES; ADD NEW STUDENT; RANDOM READ BY NAME; CORRECTIONS/MAKE UP; RANDOM READ BY NUMBER; SPECIFIC MISSED ASSIGNMENTS; ALL MISSED ASSIGNMENTS; DELETE RECORD; ADD AN ASSIGNMENT; RANDOM ADD SCORES; CHANGE PERIODS; ALPHABETICAL CLASS LIST

**PRICE: \$70.00**

### **TITLE: ADVISOR'S AID**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** This program can assist an advisor in the tracking and registration of a student. A record of courses completed by quarters including electives is provided. There is provision for entry of grade point average. Reports for a single student or for the entire curriculum can be generated. Records may be edited, searched, and sorted easily.

**PRICE:**

### **TITLE: ADMINISTRATIVE SOFTWARE**

**PUBLISHERS NAME: LEARNING TOOLS, INC.**

**DESCRIPTION:** Learning Tools provides an easy to use yet extremely powerful software system for managing special education programs with up to 10,000 students. Administrators and staff can access any student information in seconds. Highly personalized IEPs and other reports are developed interactively with the computer and printed on multiple copy paper.

Student records may contain 5 to 5,000 user definable information items per student. Individual records may be stored, edited and printed in 8 different report formats.

Administrative records are automatically updated from individual student records. Standard reports and "what if" type analyses are computed automatically.

Staff workshops are provided on special applications software, word processing, financial planning, attendance, etc.

Call Dr. Kirk Wilson today to find out how Learning Tools can make your Apple II the powerful administrative tool you were hoping it could be.

**PRICE:**

### **TITLE: ASSISTANT PRINCIPAL**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS: Two disk drives**

**DESCRIPTION:** The Assistant Principal is a complete administrative package for high schools and junior high schools. The package provides total control of class rosters, student master records, student schedules, teacher assignments and grade reporting.

The system allows the school administrator to design student input documents, enter students onto the system, schedule their classes, print their schedules, print class rosters, accept grades and test scores, print report cards, print file folder labels and prepare student master records. The system automatically prints ranked class lists and records attendance information.

**PRICE:** \$500.00 for five diskettes with a two volume manual  
\$50.00 operating manuals sold separately

**TITLE: ATTENDANCE**

**PUBLISHERS NAME: DISK DEPOT**

**DESCRIPTION:** This program allows an alphabetical list of absent students to be extracted from a main class file by simply typing in numbers. This saves teacher typing and alphabetizing time.

**PRICE: \$29.95**

**TITLE: ATTENDANCE REPORTING SYSTEM**

**PUBLISHERS NAME: EDUCATIONAL SERVICES MANAGEMENT CORPORATION**

**HARDWARE REQUIREMENTS:** 16K Expansion Card, two 16 sector disk drives and printer

**DESCRIPTION:** FINALLY. An administrative software package that is so effective that can justify by itself the purchase of an APPLE.

**ARS REQUIRES:**

64K, two 16-sector disk drives and printer. (Ask us how to upgrade you 32K or 48K system cheaply.)

**ARS FEATURES:**

- \* for schools of any size
- \* for clerical staff with NO computer knowledge
- \* eight absence categories the school defines
- \* complete, easy to use directions manual
- \* field tested and de-bugged
- \* shows excessive absences
- \* **REPORTS:** daily attendance report, individual student history, student rosters, homeroom summary reports, and others.

**PRICE: \$ 35.00 ARS demonstration system**

**\$550.00 ARS complete system**

**TITLE: AVICULTURIST III**

**PUBLISHERS NAME: AMERICAN AVICULTURAL ART & SCIENCE, INC.**

**HARDWARE REQUIREMENTS: Controller card**

**DESCRIPTION:** Data based U.S. state and world capital test program with test evaluation. Make your own test programs.

**PRICE: \$25.00**

**TITLE: BLOCKS LESSON SAMPLER**

**PUBLISHERS NAME: CALIFORNIA SCHOOL FOR THE DEAF**

**DESCRIPTION:** A group of 20+ lessons created at CSDF for a variety of grade levels and academic areas. Using these lessons will show you some of the possibilities which you may incorporate into the lessons you write. To utilize this disk, you must also have a CLASS DISK, part of the BLOCKS AUTHOR SYSTEM. This LESSON SAMPLER will not work alone.

**PRICE:**

**TITLE: BURSAR - STUDENT ACTIVITY FUND ACCOUNTING SYSTEM**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

**HARDWARE REQUIREMENTS: 80 column printer**

**DESCRIPTION:** BURSAR keeps track of funds generated by such extra-

curricular activities as athletic teams, marching bands, newspapers, yearbooks, scholarships, and student councils. It is a comprehensive system, providing everything from receipts to printed reports. No accounting background is needed.

**BURSAR GIVE YOU:**

- Reports of each day's transactions
- Financial statements for each activity
- Proof of reconciliation of the bank accounts

**BURSAR ENABLES YOU TO:**

- Open, close and update accounts
- Journalize transactions
- Monitor accounts on video display
- Print trial balance and monthly statements
- Accommodate up to 250 fund accounts (each with a maximum of 40 transactions per month) and 99 asset accounts

**BURSAR'S CLEARLY WRITTEN DOCUMENTATION INCLUDES:**

- Practical information on setting up the office with a computer
- Creating and opening accounts
- Handling and recording transactions
- Monitoring accounts
- Printing a trial balance and statement
- Starting a new month
- Making corrections
- Glossary of important accounting and computer terms

**PRICE: \$195.00**

**\$ 10.00 manual**

**TITLE: CURRICULUM MANAGEMENT SYSTEM**

**PUBLISHERS NAME: LEARNING TOOLS, INC.**

**HARDWARE REQUIREMENTS: Two disk drives, upper/lower case input & output display, and 8K memory expansion card**

**DESCRIPTION:** The system is designed to centralize instructional information, develop curricula and plan individual or group instruction in any subject area. CMS helps educators create computer-based curricula which may include multiple levels of sections, goals and objectives. User-defined categories such as methodology, assessment, test items and media/staff resources may be added conveniently at any time.

For planning instruction CMS can be used to access any computer-based instructional information within seconds. Curricula may be printed out with a wide variety of formatting options including automatic titling, page numbering, page heading, table of contents and so on. With CMS, schools no longer need to re-type each new edition of a curriculum, since the computer can automatically print out updated versions whenever desired.

A special feature of CMS is a "library file" transfer capability which enables sharing of curricula among school districts; portions of one curriculum may be transferred from a library file into another while the original "library" curriculum is left intact. Learning Tools has initiated a nationwide curriculum exchange network for sharing basic skills, academic, vocational and special education curricula.

**PRICE: \$200.00**

**TITLE: CLASS**

**PUBLISHERS NAME: EVANS NEWTON, INC.**

**DESCRIPTION:** An electronic management system utilizing the newest microcomputer technology. Tracks the day-to-day progress of students and measures their success and mastery of basic concepts and objectives.

A microcomputer program combines with a battery of newly created tests that gives teachers and administrators more than 15



valuable professional reports that will help them gauge the success of individual students and measure mastery of basic mathematical principles.

Especially created for use with Holt Mathematics, CLASS identifies what students know and what they need yet to learn. The teachers will see instantly how every student ranks in relationship to the learning objectives of the curriculum on a day-to-day, and even hour-by-hour basis. This information will permit virtually continuous grouping and regrouping of the student population; teachers can specialize in meeting the specific learning difficulties of one group of students, and at the same time, provide necessary enrichment lessons for students that have demonstrated success.

This is a comprehensive program, it will manage all students' achievement, at all grades, K through 8. It will reflect the progress of individual students, specially defined groups of students, or the entire school population.

The exclusive testing battery, created especially for applications to operator. The results of the tests are electronically transferred to the individual student's record. From this data, more than 15 reports, grade student reports, objective accomplishment reports, cumulative test score reports, and more...

Countless hours of teacher and administrative record-keeping time, duplicating and filing costs, will be eliminated with CLASS. Personnel with no computer experience can easily operate the system; no complicated operator training is necessary. And, CLASS will work with the most widely used microcomputers available.

#### COMPUTER SOFTWARE

- \* Objective and test data

- \* Class file (blank)

OPERATOR' MANUAL - including: full instructions, teacher's guide, and micro master grade-level tests for 1-8.

ADMINISTRATOR'S HANDBOOK - including: complete information on how to implement the program and use it to its maximum effectiveness.

TEACHER'S GUIDES - for all teachers in you school.

PRICE: Under \$2500.00

#### TITLE: CLASS SCHEDULING PROGRAM

PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE

DESCRIPTION: Gives the administrator an opportunity to schedule the students' courses on the screen. Permits the scheduling of required and elective courses as well as setting aside time periods for lunch periods and study halls. Will handle up to 2,400 students per run and 1,000 course with up to 16 class selections per student.

PRICE: \$ 25.00 handbook  
\$250.00

#### TITLE: COMPETENCY EXAM PREPARATION SERIES

PUBLISHERS NAME: KRELL SOFTWARE

DESCRIPTION: Consists of simulated examination modules, a thorough diagnostic package, and a complete set of instructional programs, (more than 100 programs). It is designed to teach concepts and operations, to provide drill and practice, and to assess achievement levels through pre and post testing. Provides a structured, sequential, curriculum encompassing mathematical, reading and writing instruction.

Designed for individual student use or use in a classroom setting. Programs provide optional printer capability including

worksheet generation and performance monitoring. Available in three software formats.

**PRICE: \$2499.00** Cassette or Disk  
\$1299.00 National Proficiency Series  
\$1299.00 California Proficiency Assessment Test  
\$1299.00 N.Y. State Regents Competency Test  
\$1499.00 Separate Math and Verbal Packages  
\$ 799.00 Separate Mathematical and Verbal Packages

**TITLE: COMPETENCY MANAGER**

**PUBLISHERS NAME: OMNICO**

**DESCRIPTION:** COUNSELORS can keep timely and accurate records of student progress with the computer files available in this management program. Although there is a fairly common set of competencies that students need to achieve, no one set can serve all schools. Each school can define its own set with the Competency Manager. Provision is made for automatically generating letters to students or parents containing the student's status.

**PRICE: \$550.00**

**TITLE: COMPOSITION CORRECTING PACKAGE**

**PUBLISHERS NAME: DISK DEPOT**

**DESCRIPTION:** This package will be a combination of two programs. The first program will allow teachers to individualize student assignments according to student performance in writing compositions. The student compositions ARE NOT TYPED IN. Instead, the teacher will hit numbers for certain types of errors. The computer will keep track of the errors and the line or paragraph that they were made in. Individual records are saved. After the teacher is done with all the student compositions, the computer will automatically print out all the individualized worksheets while the teacher goes to another job, or to bed. Another program in the package allows teachers to modify existing criteria and worksheets or make up their own system easily.

**PRICE: \$69.95**

**TITLE: COMPU-GRADE: TEACHER'S GRADEBOOK PROGRAMS**

**PUBLISHERS NAME: FRANKLIN SOFTWARE**

**DESCRIPTION:** Compu-Grade is a comprehensive record keeping system for educators. Designed and field tested by classroom teachers, the programs free professionals to spend time with students- not records!

In this nine program package, the traditional functions of storing and computing grades are enhanced by a package that permits sophisticated statistical analysis if desired. The report card component provides instant feedback for students and their parents.

Teachers or their assistants can easily enter student scores, weigh individual items and get a sum or average in seconds. The scores for a single student or an entire class can be safely stored until grade reports are printed.

How is Compu-Grade used by classroom teachers?

To store and average (or sum) student scores.

To display the range and distribution of scores for a single test or a single student.

To analyze scores with a complete statistical package.

To make a class printout of scores to post in the classroom.

To print individual report cards with personal messages.

It is easy to proofread and edit, as well as to update files with

new scores or student names. The program makes back up copies to prevent loss of data and insure safety. Student numbers may also be used in place of names for anonymity. Teachers say Compu-Grade works! Report cards are completed in minutes. Students receive immediate status reports. Individual reports list grades and missing work. The exclusive statistical package allows analysis of mean, median, mode, standard deviation, variance, range, frequency distributions, and z-scores. Extensive training is not necessary. PRICE: \$99.95

**TITLE: COURSE HISTORY SYSTEM**

**PUBLISHERS NAME: EDUCATIONAL TIMESHARING SYSTEMS, INC.**

**DESCRIPTION:** The SASI Course History System is a series of CRT display and printed report programs for maintaining students' courses and grades completed, and for monitoring their credit needs for graduation. A prerequisite to the installation of this system is the SASI Basic Applications System, which supplies certain necessary student data and reports, and provides an interface to the other modules in the SASI series - Student Scheduling System, Grade Reporting System, and Period Attendance System.

Courses completed by the student may be input into the system through a CRT terminal, and, if the school is also using the SASI Grade Reporting System, each term's final grades will be transferred automatically to the history file. These records are then maintained for the duration of the student's career. With each addition or change to the course history file, the student's credits attempted, credits completed, cumulative GPA, and graduation status is updated so that CRT screen displays, transcripts, and other reports produced from the course history will reflect the most recent information. Additions or corrections to a student's history may be made at any time, before, during, or after a grade reporting period. Transcripts may be produced for all students in the school, for one grade level, or for an individual student. In addition to showing a list of the student's courses taken, academic marks, grade level and term, the grade transcript also includes the student's academic GPA for grades 9-12 and grades 10-12, plus rank-in-class.

The credit monitoring feature of this system permits the school to establish a table of course and credits which satisfy the graduation requirements in each subject area. These are then used to compare to each student's course history to determine credit needs. A detailed graduation requirements report may be produced for all students in the school, for one grade level, or for an individual student, which shows the student's overall credit standing, as well as the credits needed in each subject area.

**PROGRAMS:**

- CRT screen display for maintaining course history
- CRT screen display of student's credit standing by subject area
- CRT screen display for maintaining graduation requirements file
- Grade transcript labels to affix to student records
- Grade transcript listings
- Graduation requirements listings

**QUERY**

**PRICE:**

**TITLE: CURRICULUM DESCRIPTION**



**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Used to generate a file containing the quarterly schedule of courses required by a curriculum. This file is read by the advisor's aid in order to produce student status reports.

**PRICE:**

**TITLE: DAILY ATTENDANCE ACCOUNTING PACKAGE**

**PUBLISHERS NAME: APPLIED EDUCATIONAL SYSTEMS**

**DESCRIPTION:** Enables the in-school academic computer to produce daily absentee lists within twenty minutes of the start of each school day and to compile a variety of of cumulative attendance reports whose scope has been too time-consuming for office personnel.

The Daily Attendance Accounting System is menu driven and can be operated by a person having no previous computer experience.

The following cumulative attendance reports, in addition to the daily attendance report, are available at any time:

- \*The attendance record for an individual student within any given period of time.

- \*A list of students in each grade or in the entire school who have missed a specified number of days within a given time period.

- \*For any given time period the total days absent, tardy, or dismissed for all students in any grade or in the entire school.

- \*A daily list for each homeroom of students absent, tardy, or dismissed within that homeroom.

- \*For each student who has missed a specified number of days of school the computer will print out parent's name and address on self-sticking, mailing labels.

- \* A list of students with perfect attendance.

**PRICE:**

**TITLE: ELECTRIC GRADEBOOK**

**PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**DESCRIPTION:** Helps the teacher with assignments, tests, quizzes and homework. Detailed class records are easily kept for the six weeks' period or quarter with the program.

**PRICE: \$50.00**

**TITLE: EQUIP - SCHOOL EQUIPMENT INVENTORY SYSTEM**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

**DESCRIPTION:** EQUIP is an equipment inventory program designed specifically for schools. It enables education managers to allocate, locate, and account for all the physical assets of a department, school or school system.

**EQUIP GIVE YOU:**

- Accurate and up-to-date equipment records, including description, manufacturer, model, serial number, cost and location

- Immediate reports for government and insurance agencies
- Professional, clear and concise printouts by room location, academic subject, equipment type or manufacturer

**EQUIP ENABLES YOU TO:**

- Store about 1,200 items per diskette
- Schedule and monitor the use of equipment
- Recognize and justify equipment needs
- Institute borrowing between teachers, departments and schools
- Verify losses in cases of fire, theft or vandalism
- Develop maintenance programs
- Update throughout the year, virtually eliminating the need for



time-consuming annual inventory  
Set and implement educational policies  
EQUIP'S CLEARLY WRITTEN DOCUMENTATION INCLUDES:

Getting started  
Data gathering  
Data entry  
Data sorting and retrieval  
Updating of equipment information  
Printing of reports  
Glossary of important computer terms  
Table of error messages

PRICE: \$195.00  
\$ 10.00 manual

**TITLE: FIELD TRIP LIST**

**PUBLISHERS NAME: DISK DEPOT**

**DESCRIPTION:** This program is actually a modification of ATTENDANCE. It allows lists of students going on a field trip to be extracted from a list in the same way as ATTENDANCE. It also uses the same class files.

PRICE: \$29.95

**TITLE: GRADEBOOK**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** A package of ten interlocking programs in Applesoft BASIC on a single disk. Gradebook brings the speed and accuracy of the computer to the teacher's traditional grading and record-keeping procedures. In this process, several new capabilities emerge. Some as described below, while you will discover others for system designed with the classroom teacher in mind.

\*CLASSFILE INITIATION leads you step-by-step through setting up a class file and storing it on the disk.

\*SCORE ENTRY uses the roster set up in CLASSFILE INITIATION to enter a class set of scores on one or more assignments.

\* SINGLE STUDENT EDITOR permits you to fill in "incompleteness", correct mistakes made in SCORE ENTRY, etc.

\* CLASS ROSTER CHANGE is exactly what it sounds like.

\*RECORD CHECK first summarizes the state of the class as a whole, then lets you check on how any individual is doing.

\* STATISTICAL SUMMARY can actually be run at any time you want a detailed summary of student performance for an entire class.

PRICE: \$24.95

**TITLE: GRADING SYSTEM PROGRAMS**

**PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**DESCRIPTION:** Makes the accumulation of grades for report cards and honor rolls a snap. Students' grades, averages, and school credits may be kept on disk for the entire school period. The student registration and class schedule elements are also useful for the entire year.

Can handle class schedules, rosters and grade summaries for 600 students per disk. An unlimited number of disks may be used depending on the size of the junior high, high school, or small college.

Includes the CMA Light Pen and the Electric Gradebook as described elsewhere.

PRICE: \$ 25.00 handbook  
\$300.00

**TITLE: GRADUATE RECORD EXAMS**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION:** The best way to sharpen your skills for the Graduate Record Examination is to work on actual examinations. Each of these program sets confronts the user with a virtually limitless series of questions and answers. Each program is based on past exams and presents material of the same level of difficulty and in the same form used in the Graduate Record Examination. Scoring is provided in accordance with the formula used by the GRE's.

GRE sets include 28 programs covering Vocabulary, Word Relationships, mathematics, Logical Diagrams, Analytical Reasoning, Sentence Completion and Reading Comprehension.

**PRICE: \$289.95**

**TITLE: HONOR ROLL SORT**

**PUBLISHERS NAME: DISK DEPOT**

**DESCRIPTION:** This program helps the school determine which students have been on the Honor Roll during the year. It includes GPA's.

**PRICE: \$19.95**

**TITLE: PARENT REPORTING**

**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** This "mini-word processor" lets a teacher send "personalized" messages home to the whole class. For the message, the teacher can write a general statement with "N/" where each student's name is to be placed. Each message is followed by eight different categories that the teacher defines. Categories might be: spelling, math, English, etc. or work habits, attitude...Each category may be given up to 15 different "grades".

The teacher writes the message, then selects the names of the students she/he wants to receive the message.

Next, the teacher selects the categories (subjects) she/he wants to include on the report. The grades for each category (subject) are entered.

There is also an option for a personal message.

This is a great way to keep your parents informed of what is happening in the classroom.

**PRICE: \$39.95**

**TITLE: PERIOD ATTENDANCE SYSTEM**

**PUBLISHERS NAME: EDUCATIONAL TIMESHARING SYSTEMS, INC.**

**DESCRIPTION:** The SASI Period Attendance System is a series of CRT display and printed report programs which provide for the collection, maintenance, and reporting of students' absences on a period-by-period basis. A prerequisite to the installation of this system is the SASI Basic Applications System, which supplies certain necessary student data and reports, and also provides an interface to the other modules in the SASI series - Student Scheduling System, Grade Reporting System, and Course History System.

Period absences may be collected on class rosters and input into the computer through a CRT terminal, or on marked sheets which are read into the computer by a SCAN-TRON data terminal. After the initial data has been loaded into the system, additions or corrections may be made through the CRT terminal. The minimum

system requires that one period be selected as the master attendance period for collecting and recording absences. The complete system allows for any number of periods to be recorded, up to a maximum of eight. When an absence is first recorded, it is usually treated as unexcused; however, it may later be changed to one of three reasons which are predetermined by the user. Period attendance data can be displayed on the CRT terminal by class (showing all students for one day), or by student (showing all periods for every day of a semester, one month at a time). The class display is used to input and correct original entries. The student display is used to view information on the student and to update reasons for absences. Reports available with the system include a daily master absence listing, period cut lists, various daily and cumulative lists based on selected absence criteria, and letters to parents. The daily absence listings show parents' names, home telephones and parents' work telephones in order to facilitate the absence verification process.

**PROGRAMS:**

CRT screen display for updating absences by class  
CRT screen display for maintaining student absences  
Class roster printing  
SCAN-TRON sheet printing  
SCAN-TRON sheet reading  
Daily master absence listings  
Period cut listings  
Listings of students/selected number of absences on any period  
Period absence summaries by student  
Letters to parents for excessive absences

**QUERY**

**PRICE:**

**TITLE: PLACEMENT TEST FOR PAL**

**PUBLISHERS NAME: UNIVERSAL SYSTEMS FOR EDUCATION, INC.**

**DESCRIPTION:** The Placement Test evaluates a child's reading ability and recommends which PAL grade level package (grades 2 through 6) is most appropriate for the child.

The test takes an average of 20 minutes and indicates how well the child has mastered each of the four goal areas covered by PAL: phonics, vocabulary-structural analysis, comprehension, and study skills.

**PRICE: \$29.95**

**TITLE: PROJECT ATTEND**

**PUBLISHERS NAME: EVANS NEWTON, INC.**

**HARDWARE REQUIREMENTS:** two drives, microsoft card, Chatsworth OMR-500 card reader, appropriate printers, monitors, and cables

**DESCRIPTION:** Provides State Attendance Administrators, District and School Administrators, Parents, Teachers, and Attendance Clerks with an automated Microcomputer Program. Monitors, manages and evaluates student attendance data, period-by-period, day-by-day, up to ten (10) periods per day, for schools of any size.

Attendance data is quickly and accurately entered by a simple marked card. Periodic and annual reports are provided for your school and state.

**REPORTS:**

- \* Student code report
- \* Teacher data report
- \* Student schedule report
- \* Student personal data report
- \* Absence rejection report



- \* Period follow-up report
- \* Update rejection report
- \* Principal daily absence report
- \* Repetitive absence report
- \* Teacher daily absence/tardy report
- \* Student absence report
- \* Absence report by register
- \* ADA/ADM categorical reports
- \* Head count report
- \* Year-end enrollment report

PRICE: \$1995.00

#### TITLE: PROJECT BASIC

PUBLISHERS NAME: EVANS NEWTON, INC.

HARDWARE REQUIREMENTS: Two disk drives, printer, printer interface cards, Chatsworth OMR-500 Optical card reader

DESCRIPTION: Provides administrator and teachers with an efficient system for tracking, monitoring, and evaluating students progress of school district selected Program Objectives from the Student to the District Level. Can be used to include any designated District Program, such as District Essential and Nonessential Proficiencies, Special Education, Title I, Migrant Education, and Bilingual Education.

A clerk or a teacher's aide in a school is required to insert information by feeding Mark Sense Cards into a Card Reader connected to a Microcomputer. PROJECT BASIC then scores any test up to 100 items, correlates the results to locally selected Objectives and Instructional Materials and automatically stores the result in the student file and prints the results for teacher review. Thereafter, the assigned clerk can provide parents, students, teachers, and administrators with fifteen different reports.

#### REPORTS:

- \* class list
- \* curriculum list
- \* diagnostic test file
- \* diagnostic test results
- \* summary item analysis of scored tests
- \* student history report
- \* student report card
- \* objective grouping report
- \* class activity report
- \* class status report
- \* grade status report
- \* school status report
- \* district status report

PRICE: \$1995.00

#### TITLE: PROJECT I.E.P.

PUBLISHERS NAME: EVANS NEWTON, INC.

DESCRIPTION: Provides administrators and teachers with an efficiency system for creating, monitoring and evaluating student I.E.P.'s, based on P.L. 94-142 Regulations and School District Selected Special Education Program Objectives.

Monitors minimum administrative requirements for initial student placement in a special education, student home and medical information, student diagnosis information, student prescriptions, I.E.P. evaluation criteria, long-term goals, plus day-to-day monitoring of student short-term objectives.

A clerk or teacher aide, either in the district office or school, is required to initially insert student I.E.P. information into the Microcomputer via keyboard. Thereafter, student test



information on Mark Sense Cards is fed into an Optical Card Reader connected to a Microcomputer to create and update the student's short-term objectives file. Project I.E.P. prints fifteen different reports for teacher, parent, student and special education administrative review.

**REPORTS:**

- \* Student I.E.P. file
- \* Special education objective list
- \* Diagnostic test file
- \* Diagnostic test results
- \* Summary item analysis of scored tests
- \* Student course of studies
- \* Objective test results
- \* Student history report
- \* Student report card
- \* Objective grouping report
- \* Class activity report
- \* Class status report
- \* School status report
- \* Districts status report

**PRICE: \$1995.00**

**TITLE: PROJECT TEST**

**PUBLISHERS NAME: EVANS NEWTON, INC.**

**HARDWARE REQUIREMENTS: Printer, printer interface cards, Chatsworth OMR-500 Optical card reader**

**DESCRIPTION:** Designed to be used to score any locally designated test up to 100 items, provide an item analysis of the test including recommended homework assignments for missed items, and a Summary Analysis of the scored tests.

**REPORTS:**

- \* Diagnostic Test Report
- \* Diagnostic Test Results
- \* Summary Item Analysis of Scored Tests

**PRICE: \$295.00**

**TITLE: PURCHASE - ANNUAL SCHOOL PURCHASING SYSTEM**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

**DESCRIPTION:** PURCHASE makes a school's annual ordering process a cost-effective system. It simplifies the bulk purchase of items as varied as instructional and art supplies, science apparatus, paper goods, custodial products, and health and training room supplies. PURCHASE compiles specifications, computes quantities and prices, and prints up all necessary forms. Use PURCHASE to order for a single department, or school, or an entire school system.

**PURCHASE GIVES YOU:**

- A file of your own bid specifications
- Purchase requisitions for the staff
- Formal invitations to bid for the vendors
- Purchase orders and delivery schedules

**PURCHASE ENABLES YOU TO:**

- Prevent costly calculation errors
- Avoid missed deadlines to guarantee prices
- Eliminate time-consuming typing chores
- Guarantee better service and faster response from vendors
- Promote a clearer understanding and appreciation of annual purchasing process on the part of the staff

**PURCHASE'S DOCUMENTATION INCLUDES PRACTICAL INFORMATION:**

- Getting started
- Determining and entering standard specifications
- Printing of requisitions

Compilation of orders and invitations to bid  
Awarding of bids  
Printing of purchase orders and delivery schedules  
**PRICE: \$195.00**  
    **\$ 10.00 manual**

**TITLE: REGISTRAR**

**PUBLISHERS NAME: OMNICO**

**HARDWARE REQUIREMENTS: Two disk drives**

**DESCRIPTION:** REGISTRATION SYSTEM to automate the conventional registration process for high schools. It closely emulates ordinary procedures making the transition from manual to computerized registration quick and easy. Class rolls and student schedules are automatically generated.

**PRICE: \$650.00**

**TITLE: REGISTRATION**

**PUBLISHERS NAME: DISK DEPOT**

**DESCRIPTION:** This program allows teachers to select students for classes by sorting them according to their choices or by random sorting. If the students are sorted by choice, they are allowed to pick their first, second, and third preferences. The names can be shuffled or can be sorted on the basis of "first-come-first-serve." The choices are matched with classes until all are filled. Any students who are absent are given zero's as choices and are placed in classes after everyone else has been sorted. Updating of class lists is easy, and multiple printouts of classes can be distributed, so there will be no more erroneous class interruptions!

**PRICE: \$39.95**

**TITLE: SCHEDULING PACKAGE**

**PUBLISHERS NAME: APPLIED EDUCATIONAL PACKAGES**

**DESCRIPTION:** Schools with a microcomputer can produce the same sophisticated scheduling print-outs that once had to be purchased through a service agency.

The scheduling package is menu driven and can be operated by a person with no previous computer experience. The operator selects all of some of the following reports and receives them within one school day:

Course Catalogue

Teacher Catalogue

Student Failure to Pre-register List

Student Error List

Under enrolled Class List and Students in Those Classes

Simple Tally of Courses by Grade, Department, and Sex

Student Course Request Catalogue

Student Verification Sheets

Homeroom Lists

Study Halls Lists

Course Conflict Matrix

Course Schedule for Each Student

List of Courses and Students Requesting Each Course

**OPERATION:**

Students fill out pre-registration forms which teachers and parents then review and approve. Students indicate their final course selection using mark sense cards, which are processed by the computer. A list of those cards requiring corrections is provided, and when these corrections have been made, the cards are again fed into the computer. Requested reports, selected from the list above, are automatically produced. From these

reports the guidance department is able to build its master schedule.

**PRICE:**

**TITLE: SCORE: THE ACADEMIC ASSISTANT**

**PUBLISHERS NAME: SCIENTIFIC SOFTWARE**

**HARDWARE REQUIREMENTS: 80 column printer**

**DESCRIPTION:** Interfaces an Apple with any of three card readers (Chatsworth, HEI, or Scan-tron), allowing truly automated test scoring. Student tests are scored using either raw, percent, or standardized scores. Comprehensive item analyses are conducted and the user is furnished with detailed understandable printouts. Individualized student feedback is also provided, including a history of previous test performance. Frequency distributions and complete descriptive statistics are available for individual tests and cumulative class performance. SCORE makes cumulative gradebook record keeping easy with full editing capabilities, including differential weighting of various scores, and the processing of any quantifiable grades -- not just multiple choice exams.

SCORE is a complete package of ten machine languages, menu-driven programs, easy-to-read documentation, and a commitment to ongoing support.

**PRICE:**

**TITLE: SEATING CHART**

**PUBLISHERS NAME: DISK DEPOT**

**DESCRIPTION:** This program will allow students to be sorted into a seating chart alphabetically, or randomly. Certain students can be placed in selected seats before sorting.

**PRICE: \$29.95**

**TITLE: SMALL GROUP ROSTER**

**PUBLISHERS NAME: DISK DEPOT**

**DESCRIPTION:** This program allows small organizations to keep their membership list updated. Any type of information (rank, position, status, etc.) can be recorded and a three letter code can be used to sort the members into various groups. Mailing lists can be easily extracted.

**PRICE: \$39.95**

**TITLE: SPECIAL REPORT TO PARENTS**

**PUBLISHERS NAME: DISK DEPOT**

**DESCRIPTION:** This is actually a package including two similar programs: DEFICIENCY SLIPS and EXCELLENCE SLIPS. These programs both enable the teacher to personalize special report notes to parents. The programs are written in Applesoft BASIC, and can be modified for each teacher.

**PRICE: \$29.95**

**TITLE: TEACHERS' GRADEBOOK**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** A complete gradebook system that can handle up to 260 students distributed among up to five courses. It is menu-driven for easy use. Allows great flexibility, including separate weighting of all scores and three ways of curving the results; it signals incomplete scores for the teacher and students (students are filed by name as well as by secret number so scores can be posted). Calculates current, quarter, and

semester grades, and, wonder of wonders, writes progress reports. Its display of a single student's record is ideal for parent-teacher conferences.

PRICE: \$60.00

**TITLE: THE APPLE GRADE BOOK**

**PUBLISHERS NAME: J & S SOFTWARE**

**DESCRIPTION: OPTIONS:**

1. Add grades for any activity
  - \* Records absences for the exam, quiz, report, etc.
  - \* Records type of activity
  - \* Records point value
2. Lists a student's record
  - \* All grades, type of grade & point value
3. Lists the latest class average
  - \* For each student. Can be sorted numerically.
  - \* Class average is also given
4. Lists all student grades for a particular activity
5. Corrections can be made
  - \* Grades
  - \* Make-up exams
  - \* Adding or dropping students
6. Easy to make a back-up of all class data

PRICE: \$29.95

**TITLE: THE CURRICULUM MANAGER**

**PUBLISHERS NAME: THE CORPORATION FOR PUBLIC INFORMATION**

**HARDWARE REQUIREMENTS: 80-Column printer**

**DESCRIPTION:** Originally developed as part of an Educational Audit package. CM is an instructional management system that allows teachers to set individual student curriculum goals and monitor progress on a daily, weekly or, monthly basis. It is capable of monitoring student progress in any two textbook series, simultaneously. Computer reports, prepared by class, include student name, attendance, curriculum test accuracy, current placement, daily page requirement and, teach - selected year - end goal. Building level summary reports and student take-home reports are also computer prepared. Comes with 3 manuals written in practitioner's language. Easily used by teachers and principals having no previous experience. Fully guaranteed.

PRICE: \$50.00 System Disk (one/school)

\$10.00 Teacher's Manual (one/teacher)

\$15.00 Principal's Manual (one/school)

\$15.00 Computer Manual (one/school)

**TITLE: THE GRADER**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** Designed for teachers by a noted Dartmouth College professor who knows from experience what tasks a teacher must perform to keep track of students' progress during the school year.

Has a number of options, all available whenever you run the program. You can skip those you don't want by answering "No" when asked. Some options are useful only at the beginning of a course, others only at the end, and some throughout the whole semester. You can easily change or delete data. The GRADER is easy to use and will print out hard copy for some options. It will also display useful histograms of class or individual performance.

The program allow you to select any or all of the following options:



- \* hard copy output
  - \* building a class list and making additions to the list, specifying and increasing the number of grade sets, and assigning and reallocating weight factors for each grade set
  - \* listing means and descriptions for grade sets and class performance to date
  - \* entering grades for individual sets and computing statistics for entered grades
  - \* updating total, percentage and mean
  - \* displaying a histogram of any entered set or the total to date
  - \* assigning letter grades
  - \* listing the class with names, scores of all entered sets, total weighted score and percentage to date and letter grades if assigned
  - \* alphabetization of class list
  - \* listing the class in rank order for any grade set
  - \* keeping a duplicate data file
  - \* changing individual grades or deleting student from class list
- PRICE: \$50.00**

**TITLE: THE INSTRUCTOR**

**PUBLISHERS NAME: BCD ASSOCIATION**

**DESCRIPTION:** An optional software system for use with CAVRI Interactive Instruction products from BCD. The system provides the capabilities of lesson writing, video tape logging, file maintenance and student lesson execution with scoring. Experience with computer languages and programming techniques is not required. Video programs may be specially produced for Interactive Instruction with lesson, question, and consequential reinforcement on tape. Existing "passive" programs may be updated and become interactive. The system can even rearrange existing video programs to omit outdated sequences and provide new information via the computer display. The best results are achieved by pre-planning a lesson to show the student the consequences of his decisions, rather than merely providing right/wrong reinforcement. Judgement training is a forte of the Interactive Instruction system.

When logging a video tape, the user need not remember the beginning and ending frame numbers of each scene...the computer assigns scene numbers which become the user's reference. The system provides for assigning verbal labels to video scenes for the course author's convenience. The computer can play an entire program, or just individual scenes in any order.

Video scene location is frame-accurate, thanks to CAVRI's Absolute Addressing. "Lesson pages" are computer displays of Information Text, Video Tape Segments, Keyword Questions, Multiple Choice Questions. A student response to the computer causes the system to "branch" to any desired video scene and/or any other lesson page. The course author may instruct the system to score the student's responses on a page by page basis. Student records may be maintained on a separate computer disk for later statistical evaluation.

Some lessons and/or examinations may not require the use of an Audio Visual presentation. "The Instructor" will automatically detect if an A-V program log is not present, and switch to its conventional CAI mode.

**PRICE: \$395.00**

**TITLE: THE TEACHING MACHINE**

**PUBLISHERS NAME: PROGRAM DESIGN, INC.**

**DESCRIPTION:** Series of programs showing the uses and values of educational software and containing actual samples of PDI's

educational programs.

PRICE: \$5.00

**TITLE: THE U.S. CONSTITUTION TUTOR**

**PUBLISHERS NAME: MICRO LAB**

**DESCRIPTION:** Aids students and adults who must pass an exam for graduation, immigration, or teachers certification. After selecting any answer for the 175 questions, an explanation follows to discuss why the answer was correct or incorrect. This technique increases one's retention dramatically. Questions are divided into levels of difficulty for beginner, intermediate, and advanced.

PRICE: \$30.00

**TITLE: UNICOM EDUCATIONAL MANAGEMENT SERIES**

**PUBLISHERS NAME: UNICOM DIVISION OF UNITED CAMERA, INC.**

**DESCRIPTION:** Automate your school administrative functions with a unique microcomputer software package: the UNICOM Educational Management Series. Made up of two separate modules, the Series is designed to provide local educators with the tools necessary to regain control of the important school administrative tasks of data management and inventory circulation control.

UNICOM's Educational Management Series is the result of extensive consultation with educators. Both modules have undergone field testing by administrators. Each is simple to use. Data is transferable from the Grade Reporting module to School Inventory. And, both produce on screen as well as printed reports which are practical and meaningful in day to day school management.

**GRADE REPORTING**

The Grade Reporting module is designed to calculate and maintain data on students, courses, instructors and enrollment...even with the complexity of course weights, honor points, pass/fail grades, cumulative credits, half and quarter year courses, incompletes, transfers and so forth.

The Grade Reporting Module can:

- print report cards
- calculate GPA
- calculate earned credits
- calculate, sequence and print honor roll lists
- allow definitions of grade values, and report card legends
- store and retrieve student information alphabetically, numerically, and by a user defined "key" (for compatibility with existing systems)
- store and retrieve course data by subject or instructor
- store and retrieve instructor data alphabetically or numerically
- store and retrieve enrollment data by course or student

While student, instructor and course capacities are interrelated, a typical diskette can hold information for 550 students, 150 courses and 50 instructors at 90-95% capacity. Total capacity is easily increased with additional diskettes.

**SCHOOL INVENTORY**

The School Inventory module is a comprehensive, effective tool for the management of school resources including the complete control of the circulation process. It incorporates many of the features of mainframe circulation systems costing hundreds of times more.

The School Inventory Module can:

- store and retrieve resource information by a computer assigned number, a user defined "key", and a user defined "type"
- store and retrieve patron information alphabetically, numerically and by a user defined "key" for compatibility with existing systems)
- print overdue lists and overdue notices ready for

distribution

-store and retrieve a file of categories used to logically group data for statistical reporting purposes -calculate and print patron statistics

-instantly display and report complete records of who has what and when it is due

-store and retrieve circulation statistics correlating item usage and patron usage for a given time period While capacities of items, patrons and items charged out are interrelated, a typical system can hold information on 700 items and 450 patrons with 600 items charged out at any one time. Total capacity is easily increased with additional diskettes.

**PRICE: Module I:**

Grade Reporting- complete package, including program and sample data diskettes and tutorial instruction manual.....\$250.00  
manual only.....\$25.00

Module II: School Inventory- complete package, including program and sample data diskettes and tutorial instruction manual

.....\$250.00  
manual only.....\$25.00

Super Kram Board.....\$175.00

## COMPUTER AIDED/ASSISTED INSTRUCTION

### **TITLE: +ASSEMBLER TEACHER**

**PUBLISHERS NAME: COMPUTER WORKS, INC.**

**DESCRIPTION:** Prowls your Apple's memory page by page, drawing a map of what it finds.

-Shows your CPU running in slow motion on your screen, so you can see exactly what the operations are doing to the registers and the stack (a great debugging tool).

-Exposes the mysteries of hexadecimal, two's complement, character and other data representations, instantly translating from any version to all others.

Gives you the concepts you need to cope with assembler, using simple on line lessons that make you play your way to knowledge.

**PRICE: \$44.95**

### **TITLE: ANT FARM**

**PUBLISHERS NAME: COMPUTER SCIENCE PRESS, INC.**

**DESCRIPTION:** A problem solving reference source for students of elementary and junior high school.

The manual is divided into two parts, the technical manual giving details of the language and the teacher's guide containing a brief discussion of programming concepts and how they are illustrated by Ant Farm.

Diskettes will also be available.

**Ant Farm Program Philosophy:**

This program is designed to teach fundamental programming concepts to children. Learning these principles from the beginning with the study of programming concepts will enable the students to learn good habits as their skills improve. These good habits will enable them to progress in programming more easily and become better programmers than students not well grounded in these basic concepts.

**PRICE:**

### **TITLE: APPLE COMMUNICATOR**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A basic demonstration program for assembling words and sentences using the Game I/O Connector. Under Game Paddle Control, the cursor scans across the Screen-displayed Alphabet. Pressing the button picks a letter to add to words being formed at the bottom of the screen. Adaptable to a variety of input/control methods for communication with people who may be handicapped and unable to speak or type.

**PRICE: \$28.95**

### **TITLE: APPLE FLASH (TM)**

**PUBLISHERS NAME: OMNICO**

**DESCRIPTION:** PERCEPTUAL accuracy can be practiced and tested with an infinite variety of speeds and combinations of letters, numbers, shapes, and symbols. Records students progress on disk and allows teachers to set prescriptions prior to class.

**PRICE: \$110**

### **TITLE: APPLE SEED**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** A "start up kit" for introducing computer literacy to your school, it consists of six separate components, each blending to form a concise, sound, entertaining approach to this exciting subject. With this package, you will receive:



\* Show and Tell Kit. Have you ever wondered what a floppy disk looked like? Or an integrated circuit? Or a magnetic tape? Show and Tell answers your questions. Developed for teacher and students, Show and Tell contains examples of real computer hardware. With each piece of hardware is an explanation of its importance. Bound in a durable, vinyl notebook, Show and Tell traces computer technology from the abacus to today's micros. The "see and touch" approach of Show and Tell appeals to all ages.

\* Computer and Education. Written by Dr. James Poirot, this 80 page paperback discusses computer history, educational computer applications, learning games, and current computer trends among educators. The book also provides a guide to the selection of equipment, recommendations for setting up a computer lab and seven suggestions for classroom bulletin board displays.

\* Microcomputer Systems and Apple BASIC. In simple, non technical language, Dr. Poirot explains the general development of computers, gives an overview of computer languages, and offers a step by step guide to Applesoft BASIC. In 150 pages he shows you first how to formulate problems for the computer, then how to program your Apple Computer.

\* Computer Discovery. Gives beginners hands on experience with computers. It enables students to understand, to use, and to program computers. Geared to junior or senior high reading levels, Computer Discovery consists of an Instructor's Guide, Student's Workbook, and two Apple disks. Computer Discovery not only introduces you and your students to the use of computers, it also teaches the history, applications, components, programming, analysis, and social and economic impacts of computers.

Using a lighthearted robot to illustrate programming and analysis, Computer Discovery encourages a high level of interaction between student and computer. While programming the robot to move across a playing field and to kick a soccer ball, the student learns something about algorithms, variables, conditional structures, and debugging.

For the classroom teacher, Computer Discovery includes an Instructor's Guide that details educational objectives on which to base an advanced curriculum. It also includes references, resources, and additional project suggestions.

Computer Discovery answers educator's need for a sound program to introduce kids to computers.

\* Applesoft BASIC Tutorial. Written for the person new to computers, this tutorial leads newcomers to a firm understanding of how to use and program the Apple II computer. As part of the Apple Seed package, each school receives a classroom set (25 copies) of the Applesoft BASIC Tutorial.

\* The Educational Software Directory. Eliminates flipping through catalogues and clipping ads in computer magazines. Listed in it is a short description and price for each piece of software, plus ordering information.

PRICE: \$99.95

**TITLE: APPLE SUPERPILOT**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**HARDWARE REQUIREMENTS: 16K Expansion Card, paddles**

**DESCRIPTION:** Apple SuperPILOT gives trainers and educators all the advantages of Apple PILOT, plus a set of powerful new lesson development capabilities. If you're familiar with the PILOT language, you'll quickly become proficient in developing Apple SuperPILOT courseware.

SuperPILOT uses a 64K memory environment allowing you to write and use larger programs. Other features include faster execution, relative (or "turtle") graphics for simple creation of

drawings, and various options for color, character size, and external video device control.

First-time PILOT users can quickly get "up to speed" using the Apple Super Co-PILOT diskettes included in the package. These diskettes provide a friendly, easy-to-use, interactive tutorial of SuperPILOT language commands.

APPLE SUPERPILOT...

- \*allows users to add visual emphasis to selected portions of lessons with double-sized characters, color text, and bold-face characters...

- \*gives user flexibility to control external devices such as videotape and video disk players through the "V:" command...

- \*simplifies efforts in creating geometric figures and simple objects thanks to relative ("turtle") graphics, particularly useful in discovery learning...

- \*provides a time-saving Immediate Mode for real-time interpretation and debugging...

- \*gives instructors access to large libraries of material, because programs written in PILOT 73, COMMON PILOT, and Apple PILOT may be used on the Apple Super PILOT system...

- \*lets user record student responses and grades on the same diskette, via the general-purpose record keeping files...

- \*helps evaluate student performance by timing individual student responses and allows the user to make printouts of those responses for records...

- \*lets educators share material in creating new and different lessons, because libraries of pictures, sound effects, character sets and SuperPILOT data can be saved on diskettes...

Apple SuperPILOT gives powerful new program advantages to educators and trainers either familiar with or new to the PILOT language. Beginners will find the SuperPILOT interactive tutorial (contained on two diskettes) a friendly way to learn the command structure and create simple lessons.

Apple SuperPILOT operates in two modes - Author and Lesson. In Author Mode, the instructor/designer creates lessons and stores them on a lesson diskette. The student then uses that diskette to "take a lesson," that is, interact with the computer as specified by the teacher.

In Author Mode, menus and HELP screens direct and assist in creating a lesson. The main menu provides the following options: INITIALIZE A DISKETTE - Automatically formats a diskette and copies from the Author diskette certain required system programs and files.

CREATE/EDIT PILOT LESSON TEXT - SuperPILOT is a high-level language particularly suited to the needs of courseware developers. It is the heart of the system. Using simple commands, the author defines the flow and logic of a lesson and integrates any previously defined graphics, sound effects, and special characters to that lesson. The lesson can also be tested by using the RUN option.

CREATE/EDIT GRAPHICS - The author can create high-resolution color graphics to include anywhere in the lesson(s). Simple keyboard commands draw lines, circles and rectangles; or the control paddles can be used to sketch free-form designs. Text may be written anywhere on the graphic screen. These "pictures" are stored on diskette.

CREATE/EDIT SOUND EFFECTS - Music/sounds can be dynamically created and played back using simple menus and keyboard commands. The sounds are stored on diskette for inclusion in any lesson.

CREATE/EDIT CHARACTER SETS - User-defined characters are simply "drawn" on a grid using keyboard commands or control paddles. These special characters can be associated with any Apple keyboard printing characters.

COPY A LESSON DISKETTE - Allows the author to make multiple

copies of a lesson diskette for wide distribution or concurrent use by many students.

In Lesson Mode, the student merely inserts a lesson diskette into a disk drive and is presented with the material as specified by the author/teacher.

The Super Co-PILOT diskettes provide a self-paced, easy-to-use tutorial, enabling the beginner to learn the basics and quickly begin to create lessons. The Practice Mode lets the user try out various commands.

**PRICE:**

**TITLE: APPLE TEACHER**

**PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**DESCRIPTION:** A universal teaching program. the teacher may develop lessons on the system. The pupil is permitted to select lessons to run. Also keeps track of the student's progress on each lesson.

**PRICE: \$30.00**

**TITLE: ARISTOTLE'S APPLE**

**PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** A computerized tutor for any subject, at ANY level. 48K/Disk/Applesoft. 2 modes of instruction - tutor and test; 3 quiz types - fill in, multiple choice, and matching, including alternate answers for fill-in questions; stores quizzes on disk for fast, easy access; multi-level learning reinforcement, written by a specialist in Computer Aided Instruction (CA); highly interactive, no programming knowledge necessary; good for students, home study and correspondence courses, government and ham radio exams, etc.

**PRICE: \$34.95**

**TITLE: BASIC PROGRAMMING**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** Developers of BASIC, the authors have adapted their BASIC Programming for use on the Apple II. Suitable for high school, college, and continuing education the package includes two disks or programs to explore and modify, the manual and 15 page pamphlet.

**PRICE: \$100.00**

**TITLE: BUMBLE GAMES**

**PUBLISHERS NAME: THE LEARNING COMPANY**

**DESCRIPTION:** (Ages: 4-10) BUMBLE GAMES is a set of six programs introducing the use of number pairs to name positions in an array, and points on a grid, guided by Bumble, the imaginary creature from the planet Furrin.

Plotting number pairs is a basic math skill for the computer age. Children need this skill to understand and build charts and graphs, to locate places on a map, and to design computer graphics.

The games are arranged from easy to hard, making the ideas natural to learn.

they feature color graphics that help children learn. They also feature music and sound effects that can be turned on and off. Developed with math specialists and evaluated with children.

**PRICE:**

**TITLE: BUMBLE PLOT**



**PUBLISHERS NAME: THE LEARNING COMPANY**

**DESCRIPTION:** (Ages: 8-13) BUMRLF PLOT is a set of five programs building on the graphing skills introduced in Rumble Games, also using the Rumble character. In Rumble Plot children use positive and negative numbers to name points in four quadrant grids. Plotting number pairs is a basic math skill for the computer age. Children need this skill to understand and build charts and graphs, to locate places on a map, and to design computer graphics.

The games are arranged from easy to hard, making the ideas natural to learn.

They feature color graphics that help children learn. they also feature music and sound effects that can be turned on and off.

Developed with math specialists and evaluated with children.

**PRICE:****TITLE: COMPUTER ASSISTED TELEVISION INSTRUCTION (CATI)****PUBLISHERS NAME: WHITNEY EDUCATIONAL SERVICES**

**DESCRIPTION:** The educational marvel of the eighties is audio visual lesson material made interactive by the microcomputer. Now the student is actively involved in the audio visual teaching process. The microcomputer requires (and motivates) the student to demonstrate an understanding of the lesson material as the teaching unfolds. The individual student may be presented with the precise words and color motion visuals ge or she needs to fully understand concepts and demonstrations. No longer is videotape a passive medium.

Allows the microcomputer to locate any number of user specified video segments and to play them according to programmed instructions which you may input from the same computer keyboard used by the student.

Computer text and color graphic material may be displayed as desired throughout interactive programs. Computer generated materials may be narrated with audio recorded on the videotape. Video can be programmed to be displayed from the computer or the VCR, and may switched back and forth as often as desired.

The videotape may be stopped while the computer asks questions of the student. Student answers are then typed on the keyboard. Right and wrong answers direct the VCR to play different tape segments as needed by individuals.

A unique computer program supplied with the CATI interface system allows the computer to register tape locations and store user notations in special computer files. Such logged material may be stored on computer disk and/or printed out to a small computer printer which may be added to the system.

The Whitney CATI Interface comes complete with connectors, system software and sample instructional programs.

Instruction may be written in simplified, structured Applesoft BASIC as outlined in the User Manual or with the optional authoring software system IN-SIGHT.

If extensive tape shuttling is desired, minor tape slippage inherent in all control track access systems may be avoided with an optional time code module which applies a computer generated time code to one audio track of the videotape. While normal programs do not require time code, its use allows intricate access strategies when desired.

Apple/VHS Interface- Allows Apple Computer control over the Panasonic NV 8200 VHS recorder/player and the NV 8170 VHS player only.

Apple/Beta Interface- Allows Apple control over SONY Beta videocassette recorder/players SLO 320 and 323 and Beta player only.

Apple/U-Matic Interface- Allows Apple Computer control over



UMATIC format VCRs such as SONY 2611 and 2011; Panasonic NV 9200 and 9500 and others.

Insight Videotape to Video Disk- Conversion Program- Converts Insight and Insight 1000 Plus to Videodisk Development System.

CATI Videotape/Videodisk Interface- Allows computer control over Pioneer laser type Videodisk player. Especially designed to operate with the Insight Videodisk Development System I, the circuit allows two way conversion of program from tape to disk or disk to tape. Operates all Videotape or Videodisk functions separately or in combination from within the same program.

PRICE: Apple VHS Interface: \$595.00

Apple/Beta Interface: \$595.00

Apple/U-Matic Interface: \$595.00

Insight Videotape to Videodisk: \$150.00

CATI Videotape/Videodisk Interface: \$795.00

#### **TITLE: COMPUTER AWARENESS**

**PUBLISHERS NAME: SVE - SOCIETY FOR VISUAL EDUCATION, INC.**

**DESCRIPTION:** This program dispels misconceptions about computers by introducing students to computer uses and components. Students gain a basic understanding of how computer languages work and are introduced to simple programming methods. There are four filmstrips, approximately 12 minutes long with cassettes. Two disks programmed on both sides give "hands on" reinforcement and 24 reproducible skill sheets review filmstrip concepts.

**PRICE: \$185.00**

Filmstrips and Skill Sheets only \$125.00

Disks only \$70.00

#### **TITLE: COMPUTER DISCOVERY PROGRAM**

**PUBLISHERS NAME: SCIENCE RESEARCH ASSOCIATES, INC.**

**DESCRIPTION:** The Computer Discovery Program is tailored to a wide range of students. It can be used with students who never expect to use a computer, but would benefit from understanding it. It is also an excellent prelude to continued computer study. Workbooks are written at two different reading levels to allow students to work at their own level and speed. Using a teacher-directed approach, including group introduction to each chapter, the Computer Discovery Program is designed to be completed in about six weeks.

With an individualized, student-directed approach in which the student works with the workbook and the computer, a motivated student can complete the course in under 15 hours.

At the elementary or junior high school level, the Computer Discovery Program can be implemented over the course of one semester. In high school, it can be presented in a six-week minicourse. At the college/adult education level, the Computer Discovery Program can be taught as a fifteen-hour, one-credit course.

#### **COMPONENTS**

The program consists of two diskettes for the Apple II Personal Computer System with Applesoft or Apple II Plus. The diskettes contain the interactive programs to be used with the exercises in the student workbook.

Individual Student Workbooks are the second component of the program. Two versions are available: one written at a sixth-grade reading level and the other at a ninth-grade reading level. The workbooks are alike in content, format, and appearance so students of different reading abilities can work together in the program.

The Instructor's Guide contains educational objectives for each chapter of the workbook, references, individual and class

activities, and answers to each chapter exercise.

**PRICE:**

**TITLE: CREATE SKILLS - INTERMEDIATE**

**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** This CREATE disk is similar to ELEMENTARY except it allows the teacher to type in longer sentences. There is room for 9 lines of instructions or text material at the beginning of each lesson. The instructions or text material at the beginning of each lesson. The frames which follow the introduction allow six lines for questions or additional information. The disk is ideal for teachers who want to create their own tutorial tests or drill in their own content area.

**PRICE: \$26.95**

**TITLE: E-Z PILOT**

**PUBLISHERS NAME: TECK ASSOCIATES**

**DESCRIPTION:** An updated, easy-to-use version of PILOT for the Apple II microcomputer. It is a complete system for creating lessons on the Apple II with only 10 instructions. These instructions allow the presentation of material to students, acceptance of input, judging correctness of response, scorekeeping and presentation of graphics. All instructions are simple to use and the majority can be used with two hours of practice. One disk contains the PILOT interpreter and AUTHOR is used to create lessons and E-Z PILOT presents the lessons to the student. E-Z PILOT is furnished on a copyable disk in order that schools may make back-up copies. If several copies are needed within a district, a multiple purchase arrangement is negotiable. An agreement is enclosed with the materials and the user is encouraged to sign the agreement which guarantees knowledge of future enhancements and possible errors.

**PRICE: \$34.95**

**TITLE: EARLY ELEMENTARY I**

**PUBLISHERS NAME: COMPU-TATIONS**

**DESCRIPTION:** Series of four programs designed for pre-school through the second grade. These classroom tested programs require very limited keyboard skills. A comprehensive teacher management file is included and the documentation includes ten behavioral objectives.

**PRICE: \$29.95**

**TITLE: EARLY ELEMENTARY II**

**PUBLISHERS NAME: COMPU-TATIONS**

**DESCRIPTION:** EARLY ELEMENTARY II is a continuation of a series of programs designed for the preschool through second grade levels. This disk also includes four classroom-tested programs, a password-protected teacher management file and documentation of behavioral objectives. The programs included are summarized below:

1. ALPHA DRILL requires that the student press any key when the randomly displayed lower case alpha character matches the upper case one displayed at the top of the screen.
2. ALPHABET LINE asks the student to fill in the missing letter in a section of the alphabet. An incorrect answer results in a listing of the alphabet to assist the student.
3. INSIDE OUT teaches the concepts of inside and outside by having the student press any key when various shapes which move about the screen appear inside a rectangle.

4. NUMBER LINE is similar to ALPHABET LINE in that it asks the student to fill in the missing number of a sequential listing of numbers.

These programs also include personalized congratulatory messages, music and happy or sad faces in response to each answer. The TEACHER MANAGEMENT FILE offers the same options as those in the EARLY ELEMENTARY I disk.

PRICE: \$39.95

**TITLE: EDUCATION DEMO**

**PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

**DESCRIPTION:** This disk is designed to illustrate some of the educational values of the micro-computer for the classroom use as an teaching tool. Samples and demonstrations of Educational Courseware disks are included, along with other programs.

**PRICE:** The disk is free with orders of \$100.00 or more, if requested. Alone this disk costs \$10.00.

**TITLE: EDUCATIONAL COURSEWARE FOR THE APPLE**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Avant-Garde Creations announces the addition of COURSEWARE MODULES from Zenith Coaching in Australia to its growing number of programs for education.

\* Each COURSEWARE MODULE covers a specific topic utilizing the full capabilities of the APPLE computer, including high resolution graphics, animation, and complete student monitoring.

\* Each MODULE is comprised of a series of graded questions covering a particular topic complete with revision questions (if an incorrect answer is given) designed to reinforce the principles relevant to that topic.

\* Every MODULE provides the facility for the instructor to assign unique student I.D. numbers for each student attempting the lesson. This enables the instructor to obtain detailed statistical reports on student performance. The reports cover each student individually or the entire class.

\* Z.E.S. COURSEWARE may be used alone or in conjunction with the complete Z.E.S. authoring system.

Following is a list of COURSEWARE MODULES currently available. (This list is continually being expanded, and Avant-Garde Creations invites suggestions from educators regarding topics they would like to see added to this list).

1. Phrases and Clauses (to 10th grade) Classification of phrases and clauses, adjective, adverbial usage, parts of speech.
2. Poetry (to 10th grade) Simple poetic forms including limericks, cinquain, acrostic classification and comparison of poems.
3. Introduction to Weather Charts (to 10th grade) Introduction to weather charts, air masses, pressure zones, synoptic charts, detailed graphics.
4. Mechanics and Motion (11th and 12th grade) Vectors, distance/time graphs, velocity/time graphs, acceleration units, ticker tape experiments.
5. Electricity (11th and 12th grade) D.C. circuits, resistors, networks, power, energy, ohm's law, meters, series & parallel circuits.
6. Functions (11th and 12th grade) Dependent & independent variables, range & domain region and inequality.
7. The Real Number System (11th and 12th grade) Rational and irrational numbers, surds, rationalizing the denominator, inequalities, absolute values, number line graphs.
8. The Quadratic and the Parabola (11th and 12th grade) Quadratic polynomials, finding roots of quadratic equations,



graphs of parabolas, definition of a parabola, equation of a parabola, tangents and normals.

9. Statistics (to 10th grade) Questions on mode, mean, median, histograms, cumulative frequency.
10. The Heart (11th and 12th grade) Ball flow structure, circulation, chambers identification, detailed color graphics, heart attack causes.
11. The Digestive System (11th and 12th grade) Digestive system, processing, structure, identification, absorption, by-products, hires, color graphics.
12. Gas Laws (11th and 12th grade) Boyle's Law, Charles' Law, the Ideal Gas Law, piston experiments, animated hires experiments.
13. The Definite Article, German Language (to 10th grade) The definite article, classification, analysis, grammar.

**PRICE: \$29.95**

**TITLE: EUREKA LEARNING SYSTEM**

**PUBLISHERS NAME: EICONICS, INC.**

**DESCRIPTION:** A software system for the generation of Computer Aided Instruction courses on microcomputers.

With The Eureka Learning System, teachers may develop CAI courses of their own design, without any knowledge of programming. The menu-driven Text Writer program displays all options available to the teacher at each step in the development process. The text that is developed by the teacher is then presented to the students through the use of the Educator program, which is the system's other main component.

A demonstration kit consisting of three sample lessons in punctuation, geography, and geometry, together with a copy of the Teacher's Guide, is available from EICONICS. The Teacher's Guide environment. By following the guide, teachers develop three courses, and cover most areas of the system. the \$25 fee for the kit will be deducted from the license price when a system license is purchases.

**PRICE:**

**TITLE: EXPERIENCING BASIC DUPLICATING MASTERS NO. 7412**

**PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Perfect supplement for experiencing BASIC (No. 7396) or any beginning BASIC programming course. Includes 24 pages of worksheets and tests, covering all common BASIC statements.

**PRICE: \$6.00**

**TITLE: EXPERIENCING BASIC TASK CARDS NO. 7396**

**PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Contains 30 programming cards designed to teach all common uses of the BASIC language. Individual cards allow many students to get hands-on practice at entering simple programs. Special stands allow cards to stand upright for easy reading at keyboard.

**PRICE: \$9.50**

**TITLE: FACTORING**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** Teaches the student how to factor polynomial expressions, containing a single variable, with the highest degree two.

From a readily-accessible main menu, the student is able to go directly to any of four sections of the program.



1. THE DISTRIBUTIVE PROPERTY- This section demonstrates how to remove and insert parentheses in the factoring process. FOIL is illustrated. Practice problems are generated and presented by the program and the correct answer is given when requested by the student having difficulty.

2. THE FACTORING GAME- This section of the program affords the student unlimited practice opportunities. Students working ten or more exercises become participants in the on-going "contest" monitored by the program. The student who gets all correct answers in the briefest period of time, holds the winner's title- until someone else does better.

3. THE FACTORING MACHINE- This section allows the student to enter an expression to be factored- and the program does it, step-by-step, at the student's pace. A student's delight.

4. THE SCHEDULING MACHINE- The "teacher mode", accessible by password only, enables teachers to specify the type and number of factoring exercises to be presented each student in the class. In student mode, the program generates and presents the exercises, keeps score, and subsequently (back in teacher mode) shows the results to the teacher.

PRICE: \$34.95

**TITLE: GERTRUDE'S PUZZLES**

**PUBLISHERS NAME: THE LEARNING COMPANY**

DESCRIPTION: (Ages: 6 and up) Gertrude the Goose flies in and out of the video screen with puzzle pieces of different shapes and colors in GERTRUDE'S PUZZLES - games that help children develop reasoning skills. Children learn how to solve problems with incomplete information and analyze what they see.

Players learn by moving puzzle pieces to form color and shape patterns. They move to six different puzzle rooms, each with a new challenge. Sometimes they'll arrange game pieces according to given rules, and sometimes they'll have to guess the rule.

Gertrude the Goose delivers sets of puzzle pieces and prizes. Children can design their own set of pieces, using this powerful new Discovery Tool game. Children as young as six can enjoy this program. Yet the harder puzzles still manage to challenge adults.

PRICE:

**TITLE: GERTRUDE'S SECRETS**

**PUBLISHERS NAME: THE LEARNING COMPANY**

DESCRIPTION: (Ages: 4-9) GERTRUDE'S SECRETS is a series of games that help children learn logical thinking while they play with colors and shapes. With this gentle teaching tool, children learn to create order and to plan ahead, using Gertrude the Goose.

Players solve puzzles by arranging game pieces according to given rules or by guessing a secret rule. They can play with sets of shapes that come with each game or they can create their own special shapes.

All puzzles involve thinking about the colors and shapes of pieces in each game set.

As each game begins, Gertrude the Go-Getter Goose flies off and returns with a new set of shapes.

So children can play (and learn) as long as they like.

PRICE:

**TITLE: HAND/EYE COORDINATION**

**PUBLISHERS NAME: EDUTEK CORP.**

DESCRIPTION:

### **"WRITE IT IN COLOR"**

Introduces a student to the computer keyboard. Type words in color and capital letters. Create combinations of letters -- spelling words, vocabulary lists, nonsense words -- anything goes.

### **"COMPUTER PALETTE"**

Create colorful "paintings" with sixteen colors. With an easy turn of a control a student can choose a color, paint a space, and then another, until the screen is filled with a beautiful design. A turn to the lower right corner erases the design, clearing the screen for a fresh start. A turn to the upper right corner saves the design.

### **"COOPERATION MAZE"**

Two players work together to move a "cursor" up and down; left and right; and through a maze to reach a goal. Players enjoy coordinating and maneuvering to outwit this game's maze and moving obstacles.

### **"MAKE A TUNE"**

No need to know music to create tunes. The player chooses high or low notes, fast or slow tempos...The program creates a tune from the player's notes.

**PRICE: \$45.00**

### **TITLE: HOW TO OPERATE THE APPLE II PLUS PUBLISHERS NAME: FLIPTRACK TRAINING TAPES**

**DESCRIPTION:** How to Operate the Apple II Plus is a new mini-course from FlipTrack Training Tapes that puts an end to "trial and error" learning for the first-time computer user. No more fumbling through four different manuals, wondering where to begin and what is important.

In just three audio cassette lessons of an hour or two each, the learner is carefully guided through the essentials of computer operation: How to run programs, enter data, save and organize files, make backup copies, modify programs and much more. No technical knowledge is assumed, and the emphasis is on basic operations, rather than on programming.

Designed for junior high age and up, the training package can be used again and again with students, family, colleagues, clients, staff and customers.

Apple's own System Master 3.3 diskette serves as the source of all demonstration programs and utilities used in the mini-course. The key ideas and procedures are summarized in a 28-page Operator's Guide that is fully indexed for quick reference after the course is over.

The result is a multi-media tutorial that allows the learner to concentrate on the screen and keyboard, while trying every command and observing the results. The tone is relaxed and conversational. And the patented FlipTrack cassette format adapts to individual learning needs every step of the way.

For example, the unique tape format permits users with two disk drives or a printer to receive special instruction at a flip of the tape. Any standard cassette player can be used, and no computer hookup is required.

How to Operate the Apple II Plus is presented on three spoken voice cassettes with a printed Operator's Guide, packaged in a convenient vinyl binder.

**PRICE: \$49.95**

### **TITLE: I SPEAK BASIC: A COMPUTER LITERACY PACKAGE PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** A machine specific computer literacy course that introduces students to BASIC programming. The course provides

1. THE DISTRIBUTIVE PROPERTY- This section demonstrates how to remove and insert parentheses in the factoring process. FOIL is illustrated. Practice problems are generated and presented by the program and the correct answer is given when requested by the student having difficulty.

2. THE FACTORING GAME- This section of the program affords the student unlimited practice opportunities. Students working ten or more exercises become participants in the on-going "contest" monitored by the program. The student who gets all correct answers in the briefest period of time, holds the winner's title-until someone else does better.

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**DESCRIPTION:**



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#### **PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** A machine specific computer literacy course that introduces students to BASIC programming. The course provides



student instruction in the BASIC language, and includes a Teacher's Manual, Student and Exam Set. Designed for teachers regardless of their knowledge of microcomputers and their programming skill.

The core of the course is the Student Text that features learning objectives, definitions and examples of key terms and BASIC concepts, in class programming exercises, practices and assignments. Each version includes chapters explaining the parts and operation of the microcomputer. Chapters cover BASIC programming topics such as Mathematical Operations, Scientific Notations, Conditional and Unconditional Branching, Input Statements, Loops, Reading Data, Video Display Graphics, Arrays, and Subroutines.

The Teacher's Manual provides techniques for presenting the material and emphasizing particular concepts, annotations to aid in lesson planning, suggestions for implementing the course and answers to all practice exams.

The Exam Set contains 12 quizzes on spirit duplicating masters to check student understanding and reinforce learning. The quizzes can be easily reproduced for class use. A classroom set of I Speak BASIC contains one Teacher's Manual, 20 Student Texts and one Exam Set.

**PRICE: Student Text: \$7.45**

**Teacher's Manual: \$26.20**

**Exam Set: \$12.50**

**Classroom Set: \$156.25**

#### **TITLE: INTRODUCTION TO COMPUTERS**

**PUBLISHERS NAME: SVE - SOCIETY FOR VISUAL EDUCATION, INC.**

**DESCRIPTION:** This program helps eliminate misconceptions about computers. There are four filmstrips, approximately 12 minutes long, with cassettes. Two disks programmed on both sides give "hands on" reinforcement, and 24 reproducible skill sheets review filmstrip concepts. The program describes the function of computers and explores their economic and sociological impact. Students study the major components, the purpose of computer languages, and basic programming methods.

**PRICE: \$195.00**

**Filmstrips and Skill Sheets only \$135.00**

**Disks only \$70.00**

#### **TITLE: INTRODUCTION TO MICROCOMPUTERS**

**PUBLISHERS NAME: MENTOR SOFTWARE, INC.**

**DESCRIPTION:** The National Council of Supervisors of Mathematics has defined computer literacy as one of the ten basic skills to be taught in today's mathematic classrooms. This program is designed to help students acquire the keyboard skills, knowledge of computer terminology and computer components necessary for survival in a society increasingly influenced by computers. Six programs plus a teacher's guide. Elementary through Junior High.

**PRICE: \$54.95**

#### **SOFTWARE**

**TITLE: JUGGLES' RAINBOW**

**PUBLISHERS NAME: THE LEARNING COMPANY**

**DESCRIPTION:** (Ages: 3-6) JUGGLES' RAINBOW is for young children who want to use a computer before they read. They divide the keyboard in half with a blue strip. Then they press the keys to make pictures appear. Juggles, a colorful clown, sets the scene for spatial learning games.

The first game, Juggles' Rainbow, has cycling rainbow colors for

"above" and dancing rain for "below". Another, Juggles' Butterfly, shows a butterfly with changing colors on its wings to illustrate "left" and "right". Children also work with lines and circles that help them learn the letters p, d, b, q, the most difficult one in the alphabet. Picture clues let children work alone or with friends while melodies play and patterns appear.

**PRICE:**

**TITLE: LESSON-TUTORGRAPHS**

**PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

**DESCRIPTION:** Each LESSON-TUTORGRAPH package is a complete single topic tutorial which contains the following features:

A) Programmed presentation of lesson material with branching and review based on student response to questions. If a student misses a review question he is given the information in a different format and asked a differently worded question covering the same concept. Each lesson has been researched thoroughly for accuracy and relevancy to the classroom curriculum.

B) Full-color high-resolution illustrations complement each lesson presentation. Animation is used where applicable for emphasis and reinforcement.

C) The student can access any page of text or illustration for further review independently of the standard programmed presentation. This feature can also be used by the teacher as part of a lecture or as a computerized animated filmstrip by using a number of TV/monitors or a large screen TV.

D) A test is provided which is graded by the computer. It tells the student his score, and identifies the questions he answered incorrectly plus reinforcing the correct answers. The computer indicates which questions were missed, and when the student accesses the review function directs him to the page of text and/or illustration which relates to the questions missed.

E) Included with each lesson is a multi-purpose manual including lesson objectives, a student user guide, all text, questions and answers used during lesson presentation and test, and suggestions for classroom/individual use of materials.

The first 2 releases in TYC'S LESSON-TUTORGRAPH series are WEATHER FRONTS and SHORE FEATURES.

**WEATHER FRONTS:** This program provides an introduction to the concepts of weather fronts, their structure and nature. Concepts presented include front characteristics, frontal movement, and weather characteristic of different types of fronts. SIX color cross-sectional diagrams illustrate cold, warm, and occluded frontal structures. An ideal introduction to this concept for high school and college students.

**SHORE FEATURES:** This lesson's purpose is to acquaint the student with the geographical features of the shore/beach area of the coast. The student will be able to identify and define the following features: beach/shore, berm, dunes, backshore, foreshore, low/high tide marks, low tide terrace, offshore area, trough, and bar. This program features 54 illustrations highlighting the location of each feature. Excellent for teachers or students of geography, geology, or oceanography-high school through college.

**PRICE: \$24.95**

**TITLE: LOGO**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION: WHAT IS LOGO?**

LOGO is a unique computer programming language. Developed at M.I.T.I., under the sponsorship of the National Science Founda-

tion, LOGO was created primarily to foster education. It is a complete and powerful programming language. Its exceptionally rich graphic power and its simple commands structure make LOGO ideal for introducing children and, indeed, all new programmers, to the world of computers.

M.I.T.'s LOGO for Apple II can be quickly learned by even the youngest and most inexperienced user. Because new users can rapidly master LOGO's color, sound, and graphic capabilities, LOGO is able to convey the crucial sense of mastery to the learner. It is this mastery that fundamentally changes the way in which the user perceives his relationship to the computer. The student is now the creator. As he interacts with the microcomputer the student is transformed. From mere passive recipient of information he evolves into the motive force commanding, directing, and animating the reality he produces. In this way, the user establishes an intimate relationship with the process of knowledge formation. He begins to view himself as personally responsible for creating that knowledge.

#### A SAMPLER

The LOGO cursor is called the turtle. The simple graphic commands in LOGO let you move the turtle on the screen. These commands:

1. FORWARD
2. BACK
3. RIGHT
4. LEFT
5. SETHEADING
6. SETX
7. SETY
8. SETXY
9. BACKGROUND
10. PENCOLOR
11. PENUP
12. PENDOWN
13. HOME
14. CLEARSCREEN

will allow you to move the turtle in any direction. They also give you the power to point the turtle in any direction and turn him whenever, and by as much as you wish.

Graphics commands also allow you to specify if you want the turtle to leave a trail as he moves. You may even hide the turtle and then move him, with or without leaving a trail behind. Simple commands allow you to change the color of the screen background and turtle's trail.

One very powerful feature of LOGO is that it allows its users to write programs which use other programs that they have previously defined. That is, in effect, the user can help to create his own language.

So far, we have talked only about how to make shapes with LOGO. However, it would be a terrible injustice to the LOGO language to regard it as merely a graphic tool. LOGO can be used to examine and manipulate all sorts of symbols including letters and numbers. For example, a LOGO program can be written to find all the words in a sentence that begin with the letter "P". More important, LOGO programs can be written which pose questions in the English language. Similarly, LOGO programs can be made to examine student answers written in English. A good illustration of how this is done may be seen in the M.I.T. demonstration program, ANIMAL, furnished by Krell.

We shall not extend our examples here, but simply note that examples may be produced easily and in as infinite a variety as examples of the different things which could be written on a typewriter.

KRELL'S LOGO PACKAGE FOR APPLE II



1. Two copies of Krell's LOGO for Apple II authorized by M.I.T.
2. A UTILITY disk containing M.I.T.'s extremely valuable demonstration material, a series of pre-defined shapes which may be substituted for the LOGO TURTLE, and Krell's time-saving library of pre-defined procedures.
3. ALICE IN LOGOLAND, a twenty program tutorial series for intermediate and experienced programmers new to the LOGO language.
4. The technical manual LOGO for Apple II by H. Abelson & L. Klotz. This is the official technical manual issued by M.I.T.
5. LOGO FOR THE APPLE II by Harold Abelson, Byte Books. A complete instruction manual for intermediate and advanced users of LOGO.
6. THE ALICE IN LOGOLAND PRIMER, a step by step, lavishly illustrated introduction to LOGO for those who are new to both programming and to LOGO.
7. A comprehensive wall chart that portrays, explains, and graphically illustrates the LOGO commands in action.
8. A one-year's free subscription to the LOGO AND EDUCATIONAL COMPUTING NEWSLETTER. (Regularly \$30.00 per year.) A new authoritative source of information about the structure, classroom application and capabilities of LOGO, and an up to the minute forum on the most significant new ideas and issue in educational computing.
9. Materials describing the Young People's LOGO Association together with an invitation to join. (Free to those younger than 18.)
10. Krell's guarantee against all defects.
11. Krell's telephone HOT LINE that assures teachers and users of ready access to the information support they may need.
12. The assurance that Krell's Board of Education Advisors, Prof. Ludwig Braun, Chairman, will guide the future development of application materials and keep Krell's LOGO users up to date on all developments in the language.
13. Krell has arranged with Socrates Learning Centers (headquarters Stony Brook, N.Y.) to provide each purchaser of Krell's M.I.T. LOGO for Apple II with a free introductory classroom session. More extensive courses in LOGO for teachers, administrators, and any purchaser of the Krell LOGO package may be obtained at a special discount from the Socrates Learning Center's regular fees.

**PRICE:**

**TITLE: LOGO LANGUAGE FOR THE APPLE II**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Apple Logo allows students of all ages to learn computer programming on one of the most widely used microcomputers, the Apple II. The language makes explicit many of the fundamental ideas of programming, encourages good programming habits, and provides powerful language processing that makes word-oriented programs as easy to write as numeric ones. With Apple Logo, users develop problem-solving skills that can be applied to a wide range of subjects.

"Apple Logo offers a discovery-oriented approach to learning that attracts and holds students' attention," said Rob Campbell, product marketing manager for applications software. "Because it doesn't require complicated commands or an understanding of high-level mathematics, it is suitable for young children as well as adult computer novices. Whether used at home or in school, Apple Logo is the ideal language for learning computer programming."

Turtle Graphics is one of Apple Logo's key features. Students



use simple, literal commands to control a "turtle" cursor that draws on a high-resolution video screen. Users acquire programming skills by instructing the turtle to generate shapes and designs. Because Apple Logo is interactive, it executes commands instantly- students immediately see the results of their programming efforts.

The commands FORWARD 30 RIGHT 90, for example, direct the turtle to draw a line 30 steps long and then make a 90-degree right turn. By typing the instructions four times, the student programs the computer to draw a box. Then by saving the series of instructions as a single procedure, BOX, the drawing can be quickly incorporated into more complex designs.

Like other structured high-level languages, Apple Logo is procedural: it allows the user to divide complex programming projects into small, manageable pieces. (To draw a simple house using Turtle Graphics, for example, independent procedures for a box and a triangle could be written and then combined to form the building.) This not only simplifies the task of program debugging, but also allows the programmer to accumulate large libraries of procedures to use again and again.

**PRICE: \$175.00**

**TITLE: MASTERING THE PARTS OF SPEECH**

**PUBLISHERS NAME: SVE - SOCIETY FOR VISUAL EDUCATION, INC.**

**DESCRIPTION:** Six microcomputer disks with 42 skill sheets and a teacher's guide. The programs cover the following parts of speech: verbs, nouns, pronouns, adjectives, adverbs, prepositions and conjunctions. Extensive use of color graphics.

**PRICE: \$295.00**

**TITLE: MICROCOMPUTER USE & SOFTWARE DESIGN No. 7884**

**PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** This 64-page booklet shows you how to introduce students to the computer keyboard, how to select strategies to implement computer lessons, how to plan and design your own software, and how to communicate your design to the programmer. Includes a glossary of common computer terms.

**PRICE: \$5.00**

**TITLE: MICROCOMPUTER WORKBOOK COURSEWARE/SOFTWARE**

**PUBLISHERS NAME: STERLING SWIFT PUBLISHING CO.**

**DESCRIPTION:** Disk and Cassettes load the microcomputer for computer assisted instruction. The tutorials on disk or cassette parallel chapters in the workbook.

**Tutorials:**

Basic One- Keyboard Operation

Basic Two- An Introduction to Basic

Basic Three- Programming- A Beginning

Basic Four- Program Input Commands

Basic Six- For Next Loops

Basic Seven- Arrays

Basic Eight- Character Strings

Basic Nine- Functions and Subroutines

Basic Ten- Graphics

Basic Eleven- Advanced Topics One

Basic Twelve- Advanced Topics Two

Applications One

Applications Two

**PRICE: \$69.00**

**TITLE: OMNISCAN LASER VIDEODISC INTERFACE**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** The OmniScan LaserDisc System from Aurora Systems is the most revolutionary means of information storage and retrieval since the printing press, because it combines the three most important technologies in existence today:

- \* The Apple II personal computer - the most popular in existence.
- \* The LASER beam, which can be focused within microns.
- \* Ultra-high-density storage (about 30 billion bits of information) imbedded on inexpensive molded plastic disks.

Used to control the low-cost Pioneer VP-1000 LaserDisc player in an interactive way, with software running on the Apple II computer. The Apple duplicates the operation of the LaserDisc's control panel from the keyboard or under program control. It is even possible to flip your video monitor to show the Apple's output or the VideoDisc image.

Used as an instructional system, for example, the OmniScan system can teach, test, grade and review material based on individual learning rates. The videoDisc's ability to carry all media forms - films, filmstrips, transparencies, text books, computer generated text and graphics, still slides, music, bi-lingual speech, etc. - means that one medium can be used to provide multimedia learning experiences.

Up to 54,000 uniquely individual frames on each side of the disc can be randomly accessed in seconds. And the information can be indexed a number of different ways depending upon your needs. The branching capability of the computer allows unlimited flexibility in programming a learning sequence.

Another important use of the system is as a visual database of any material. Unlike any other form of computer aided instruction, this system can show incredibly live action, detailed close-ups, time-lapse, slow motion, and stop-frame, all with no loss of picture quality - all under program control.

**PRICE: \$250.00**

**TITLE: PAL**

**PUBLISHERS NAME: UNIVERSAL SYSTEMS FOR EDUCATION, INC.**

**DESCRIPTION:** The first educational software program to use a diagnostic/remediation approach to teaching reading, PAL covers the entire scope of reading education for grades 2 through 6. The curriculum has been developed through seven years of field testing, and has been validated against the top seven textbook reading series in the United States.

PAL diagnoses the specific deficiencies in a child's reading ability, and prescribes remediation exercises directly targeted at the problem diagnosed. The program evaluates up to 40 major reading skills and up to 160 subskills per grade level.

PAL uses a friendly, personalized approach that is non-threatening to the poor reader. A primary emphasis of the PAL programs is allowing every child to experience success.

PAL consists of two parts: the Master Disk package, and individual Reading Packages for each grade level. The Master Disk operates all the grade level programs.

The Master Disk contains an upper/lower case chip for the Apple II, which allows PAL to present exercises in a "real world" format. Each Reading Package contains one Discovery Disk, which performs the diagnostic testing, and one or two Learning Disks, which provide 300-400 remediation exercises for each grade level. For classroom use, PAL keeps records for up to 30 students and gives an update on each student's progress every time he/she signs on the machine. The program offers flexible sequencing through the objectives, so that a customized program can easily be developed for each child.

**PRICE: \$99.95**

**\$9.95 A two-disk demonstration package**

**TITLE: PASS**

**PUBLISHERS NAME: PERSONAL COMPUTER CENTER**

**DESCRIPTION:** PASS (Professional Authoring Software System) is a powerful English-based authoring system that allows you to create CAI courseware with prior programming skills or knowledge. PASS prompts and questions the instructional designer. It's features make sophisticated programming skills available to anyone without the need to learn a programming language. PASS has an intelligent structure that allows anyone to author lessons with nearly unlimited flexibility.

Lessons are easily updated. A complete word processing system has been built into PASS. This allows you to quickly change words or sentences within lessons. Automatic grading and lesson analysis provides you with quality control and immediate validation.

Each student receives uniform instruction that has been individualized to meet their personal learning needs. PASS offers students self-paced, interactive, stimulating learning.

PASS, an authoring system, compared to traditional programming:

<u>Authoring</u>	<u>Programming</u>
- Prompts/Questions Author	- Blank Slate
- Has Pre-defined Authoring Format	- Total Configurability
- Contains Automatic Branching, Grading, Record Keeping	- Each Lesson Requires Branching, Grade Recording & Analysis Programs
- Intelligent Structure	- No Structure
- High Speed Lesson Execution	- Speed is a Problem
- Requires Little Production Time	- Requires Extensive Production Time

PASS lessons are easily and inexpensively reproduced. Complete authoring training is provided with each PASS license.

**PASS Components**

Authoring System:

English Based Authoring  
Fully Programmable  
High Resolution Graphics  
User Definable Characters  
Video Interface  
Powerful Answer Judging

Presentation System:

Learner Entry Validation  
Automatic Data Acquisition  
Carry Out Branching

Management System:

Learner Enrollment  
Entry Security  
Linear Branching  
Dynamic Branching

Direct Branching  
Prescriptive Branching

Reporting System:  
Analysis by Learner  
Analysis by Unit  
Analysis by Lesson

## **PASS Features**

### **Development**

- Lesson Development
  - Lesson Entry
    - Text/Graphics Editor
  - Prompting Formats
    - Dialog
    - Testing
- PASS Languages
  - Display Commands
  - Structural Commands
- Branching
  - Linear
  - Dynamic
  - Direct
  - Prescribed

### **Imagery Development**

- Characters & Symbols
- Graphics Tablet
- Video Tape & Disk
- Slide & Filmstrip

### **Management**

- Learner Management
  - Enrollment
  - Grading
  - Lesson Analysis
  - Question(s) Validation

Custom computer assisted programs written with PASS or the PASS system license is available through Personal Computer Center.

### **PRICE:**

### **TITLE: POLY-CHOICE**

### **PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** In this multiple-choice activity, any subject can be exciting when students play and win "play bucks" by selecting correct answers.

The teacher needs no programming skills to type-in text, questions, and answers. Using a special text-input program, the teacher creates high resolution text (from one to twenty lines per page), and up to five questions per page with a maximum of four multiple-choice answers.

Students can learn any subject playing Poly-Choice -- reading comprehension, history, mathematics, social studies, science, etc. The student can have the text re-presented at any time during the session. The correct choice is shown the student immediately after an incorrect response.

The system will print a report contains the following data for each time the program was used:

- \* the student's name
- \* the number of questions presented
- \* the percent and number of correct answers
- \* the number of times text was re-presented

**PRICE: \$100.00**



**TITLE: POTPOURRI****PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

DESCRIPTION: The disk includes some studies and programs created by students and accepted as good examples for general use.

- \* Number Race is a 'game' that illustrates how algorithms and logic are used by some programmers. Instructions are included.
- \* Tim's Lissajouse displays the various lissajouse patterns, in graphics, that are obtained from the inquiring student.
- \* Conversions is a program that allows you to find almost any English, measurement conversion factors. Length, speed, mass/weight, area energy, volume, force, etc. are easily converted.
- \* Calculator turns your Apple into high speed, specialized, calculator to work in the areas of physics, chemistry, astronomy, and mathematics. It's better than any hand held calculator.

PRICE: \$24.00

**TITLE: PROGRAMMER****PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

DESCRIPTION: The Programmer can teach you to program your Apple II using its fast Integer Basic. The system includes twelve easy to follow lessons which cover the commands of the language and computer programming techniques. The system will even test you to see if you have learned your lessons and send you back to another lesson if you have a problem. A bonus element also lets you have a little fun learning about the graphics and sound side of your Apple II.

PRICE: \$34.95

**TITLE: PROGRAMMER PLUS****PUBLISHERS NAME: MUSE SOFTWARE**

DESCRIPTION: A 16 lesson course in Applesoft II on two full disks or super load tape which will teach you all you need to know to program in BASIC. Lessons cover all string, math and logical operations necessary for personal, scientific or business applications. Special units teach graphics and sound.

PRICE: \$39.95

**TITLE: QUESTION & ANSWER GROUP****PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

DESCRIPTION: This group of disks are written in the question/answer format. You can add your own lessons in any subject at any level, with your style. You can alter any of your lessons at any time, or erase a lesson if you wish. Some of the disks in this Q/A group include:

- \* American History - colonial period, wars, national expansion presidents
- \* General biology - plants, animals, hormones, digestion
- \* General chemistry - the elements, ions, crude oils, compounds
- \* Create your own subject disks

PRICE: \$32.00

**TITLE: RELIABILITY TEST****PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

DESCRIPTION: Teachers! Are your multiple choice tests reliable? Now you can find out easily with this program. You enter the

number of test items and the student scores and the program does the rest. Computes the Kuder-Richardson estimate of test reliability. It also allows you to store, retrieve, and edit test score files as well as print files and statistics to a printer.

**PRICE:**

**TITLE: ROCKY'S BOOTS**

**PUBLISHERS NAME: THE LEARNING COMPANY**

**DESCRIPTION:** (Ages: 7 and up) ROCKY'S BOOTS, featuring Rocky the Raccoon, is a game that helps children build a basic groundwork in logic skills that they'll use for the rest of their lives. Players build animated logic machines to score points in the game. While building the machines, children learn the basics of computer circuits.

The machines operate a kicking boot and players score or lose points for "booting" particular objects. Rocky's Boots has the appeal of an arcade game with the content of a logic course. The game features color graphics that help children learn. It also features music and sound effects that can be turned on and off.

**PRICE:**

**TITLE: SAMP**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** Choosing a sample of respondents is an important step in conducting a social survey. A discussion of sampling techniques therefore is part of most courses on social research methodology and social statistics. However, it is difficult to teach students about sampling in a way that makes the subject interesting and meaningful. The traditional approach is to discuss the statistical formulas that predict the relative precision to be expected from various sampling designs. However, most students lack the mathematical background in probability theory that is needed to do justice to such a presentation. And it is difficult for students to grasp the practical implications of different sampling designs without an opportunity to test them.

An ideal way of demonstrating the theory of sampling is to compare the results obtained from a number of large surveys of the same population, each survey identical but for the sampling design. However, this approach is obviously impractical. As an alternative, the SAMP package simulates surveys. Using one to four sampling designs, students can draw a sample from a town's population and the program will report the results of administering an attitude questionnaire. They can conduct as many simulated surveys as they choose, varying the sample size and design and exploring the effects of these factors on the precision of the results. In addition, the program provides information on the costs of administering the surveys so that students can see the financial implications of their choices. Finally, students can compare the sample results with the true result obtained from a population wide census. And this entire process takes, on average, only about one hour's interaction with the computer.

The great advantage of using the SAMP package is that students gain an intuitive grasp that, for any given sampling design, the precision of their results varies inversely with the sample size, and that the more complex designs involve a trade-off of increases cost against better precision. They can then relate this understanding to the more formal, theoretical knowledge they gain from classroom lecture and textbooks.

The SAMP package is designed to accompany courses on research methods in disciplines such as sociology, geography, planning, and economics. Before using the simulation, students should be introduced to the concepts of sampling and randomness and to some elementary statistics. Although SAMP is an interactive package that students use on their own, it is most effective as part of a module on sampling. This module might include a lecture on sampling theory, some outside-class reading, use of the package, a report from the student summarizing and commenting on the results obtained, and class discussion. How best to use SAMP is discussed in the Instructor's Guide included in the package. This guide also provides a review of appropriate parts of the theory of sampling, a typical student assignment, a model answer to the assignment, and a bibliography on sampling theory and design.

**PRICE: \$65.00**

**TITLE: SCHOOL DAYS**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** This is a complete educational system. Let your Apple teach Spelling and Math in an interesting and fun set of education programs. This is a complete educational aid for grades 1 through 8 or those of whom just missed the New Math. The package includes The Math Teacher, State Capitols, Scramble words, Crosswords, and a featured element on number base systems.

**PRICE: \$49.95**

**TITLE: SCHOOLHOUSE I**

**PUBLISHERS NAME: COMPU-TATIONS**

**DESCRIPTION:** SCHOOLHOUSE I includes the following ten educational programs on one disk, primarily oriented to the elementary grades.

**SPELLING WORDS:** a dynamic program using color and sound to drill a student on spelling words until all are mastered. Words are scrolled briefly on the screen for recognition and then must be typed in. Score summaries and re-runs are available.

**HANGMAN:** The familiar learning game with a different twist. A secret word is entered by one person and others try to guess it by choosing letters. Misses add features to a hi-res hangman display.

**WORD FUN:** Based upon blind ad-lib stories, the program explains, gives examples of and requests 5 nouns, adjectives, adverbs, and verbs along with some information about the user. Presto! A very funny story appears using these parts of speech.

**ROMAN NUMERALS:** Using lo-res graphic display of Roman numerals, the student is taught and quizzed on principles of Roman numerals and can view facts or return to quiz at any time.

**GUESS MY ..NUMBER:** Teaches bracketing technique to find an unknown number.

**ADDING COLUMNS:** Enter figures for addition or subtraction and this program displays a tape of the item number, entry and cumulative total rounded to 2 decimal places. It also scrolls to show the last 18 entries.

**DIVISION WITH R:** Division with remainders instead of decimals. Enter dividend and divisor. See problem and quotient with remainder.

**LEARN A POEM:** Enables programmed learning of poems, theatrical lines, etc. through the use of data statements and display at your own pace.

**UNKNOWN VARIABLES:** Presents simple equation problems and asks for the value of the unknown variable "n". Teaches the algebra concept and keeps score.



FRACTION PROBLEMS: Enter any 2 fractions (a and b) and immediately view the compound fractions, simple fraction equivalents, the fractions in lowest common denominator and the final compound fraction solution in lowest terms for the four basic operations:  $a+b$ ,  $a-b$ ,  $axb$ ,  $a/b$ .  
PRICE: \$24.95

TITLE: SCOTTS VOICE BASED LEARNING

PUBLISHERS NAME: SCOTT INSTRUMENTS

DESCRIPTION:

WHAT IS IT?

An Apple computer with programmed lesson questions on the screen.

A Scott Voice entry unit and microphone into which answers are spoken.

Optional film strip projector to interface illustrations with lesson questions.

WHO PROVIDES THE PROGRAMMED LESSONS?

Anyone! No computer experience necessary. Author simply types questions.

IMPORTANT REASONS FOR USING VOICE BASED LEARNING?

- \* verbalization of answers is required
- \* pronunciation is important in any learning task
- \* communication skills are encouraged
- \* fear of speaking into a machine is overcome easily
- \* student does not have to type

ADVANTAGES OF THE VOICE-BASED LEARNING SYSTEM

- \*Due to the novelty of Voice-Based Learning Systems (VRLS), it is anticipated that the material that is learned using THE PROMPT MACHINE System will, by necessity, be applied in situations that differ from the learning context. This potential for transferring information beyond the limits of the learning environment is seen to be advantageous.
- \* Almost all of the student's sensory-motor mechanisms are called upon to participate in voice-controlled CAI. The student's vocal performance demonstrates a synthesis of cognitive and affective capabilities.
- \*Effective communication skills are encouraged because of the multisensory modalities of THE PROMPT MACHINE System strategy (see, say, hear, and do).
- \* The student does not need to translate mentally derived solution into keyboard manipulations which, in essence, interfere with the continuity of the learning loop.
- \* The process of translating visually displayed images into oral language encourages the learner to explore reading, interpreting, and making abstract symbols.
- \*THE PROMPT MACHINE System is organized in such a way as to facilitate individualized learning within a controlled student study station that is sensitive to hostile environments (noisy classrooms).
- \* Visual and auditory senses, typically, dominate the delivery of sensory messages to the brain. Within the voice-controlled CAI environment, these sensory modalities are reinforced with voice.
- \* Studies have shown that pronunciability is an important variable in a variety of learning tasks (Underwood, Postman, Schulz, Martin, DiVesta, and Ingersoll), and that opportunities to pronounce words contribute to learning.
- \* The integration of verbal information relates to the ability to recognize the word(s), the frequency with which the item is experienced, the ability to pronounce the item, and the number of associations that the item elicits. Voice-controlled CAI enables the student to experience this integration within a



structured format.

- \*THE PROMPT MACHINE System is designed to impel the learner to engage in a vocal dialog with a computer system. It is felt that this strategy arouses a dimension of motivation in the student.
- \*The visia; requirements of THE PROMPT MACHINE System supplement the learner's auditory, oral, and tactile skills.
- \*It is anticipated that there is an element of incidental learning through exposure to Voice-Based Learning Systems that has yet to be realized.

**PRICE:**

**TITLE: SIMULATED COMPUTER**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** This program simulates the operation of a small machine language computer. The video screen becomes a computer: the internal registers and all 2<sup>0</sup> memory locations are displayed on the screen. You can input programs, run them, single-step them--and see the results of every machine cycle on the screen. The ten different instructions available permit the writing of a surprising variety of programs. The computer can be single-stepped, run at a speed chosen by the user, or run at full speed. A "display" option causes the computer to display a message describing what it is about to do, just before it executes each machine cycle. There are eight different error messages to help the user debug programs. A simulated "break" key is provided, and the full documentation can be reviewed just by typing "HELP". The program comes with a five-lesson tutorial and a complete manual (not the program) for classroom use.

This program is an excellent introduction for an individual or a class. One can learn the principles of the operation of a computer and of machine-language programming, in a realistic setting, without the necessity of learning hexadecimal notation, an instruction set containing scores of instructions, etc.

**PRICE: \$14.95 cassette**

**\$19.95 disk**

**TITLE: STUDY QUIZ FILES (SOF)**

**PUBLISHERS NAME: COMPU-TATIONS**

**DESCRIPTION:** A powerful teaching program which enables a teacher, parent or student to create, save, retrieve, revise or run study quizzes on any subject without any programming knowledge. Uses the word match format with all choices displayed. Two versions are provided on the disk. The more popular edition requires the user to type on the number of his answer choice. The FULL-ANSWER version requires the user to type in the complete response, thereby reinforcing spelling as well as learning skills.

**PRICE: \$24.95**

**TITLE: SUPERPILOT**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** "Lessons or training sessions created on SuperPILOT will make difficult concepts and processes easier to understand and retain." "Powerful computer simulations for industrial or academic learning situations can now be designed without a main frame computer or its complicated software."

"SuperPILOT's power and flexibility make it the right choice for teachers in education and trainers in business and industry who develop courseware or instructional materials."

The SuperPILOT program:

- controls external videodisc and videotape through user and

computer command and response;

- presents "turtle" graphics for easy graphics programming and discovery learning;
- allows for immediate debugging of a program-in-progress, which reduces programming frustration;
- displays color text on color background;
- displays double-sized characters for emphasis;

Also announced are two support products in Apple's PILOT family, Co-PILOT and SuperPILOT Log. Co-PILOT is a completely self-contained, self-paced interactive tutorial on two diskettes which teaches how to program in Apple PILOT. SuperPILOT Log works with SuperPILOT as an administrative record keeping program that automatically tracks test scores entered manually.

**PRICE:**

**TITLE: SURFACE FOR THE APPLE II**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** SURFACE for the Apple II, is intended for students, either individually or in small groups, to use as a supplementary study aid. The package is based upon the earlier CONDUIT package by the same name which was designed for line printers and "character" graphics. Like the earlier unit, SURFACE for the Apple II relies heavily on the numerous exercises in the Student Guide for its instructional value.

The exercises follow a common theme- to illustrate the "most interesting" portions of functions of two variables in ways that most clearly depict those features. Students learn by doing, starting with relatively straightforward exercises, then moving to more challenging ones.

The versatile plotting program in this package is very similar to the Surface Construction program in the first package. In the process of using the program, students sharpen their ability to visualize three-dimensional surfaces. They also become familiar with the parameters affecting how such a surface is represented in two dimensions: the position of the viewer relative to the object, and the position of the plane upon which the object is projected. Thus, students learn some otherwise difficult concepts (including perspective) as they control the viewing parameters and quickly see the results. The table of contents of the Students Guide, reproduced below, gives an excellent overview of the concepts covered in the exercises.

**1. Introduction**

How to Use Surface for the Apple II

Basic Rules

Examples of Basic Expressions

Exercises

**2. Domains**

Example of a Restricted Domain

Two More Basic Rules

Notes on Domain Restriction

Exercises

**3. Scaling and Positioning**

Changing the Rectangle

Changing the Scales

Changing the Origin

Exercises

**4. Viewpoint Parameters**

Definitions and Explanations

Experimentation

Exercises

5. High Resolution Graphing  
What the Programs Do  
Exercises
6. Quadric Surfaces  
Reduction to Standard Forms  
Quadric Surfaces Saved on Disk  
Exercises
7. Miscellaneous Explorations  
Example: A Cubic Surface  
Example: Ridges and Valleys  
Example: Nonplanar Tangent Lines  
Exercises  
Answers "In the Back of the Book"

**PRICE:**

**TITLE: SYSTEMS ANALYST**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Systems Analyst is a complete teaching and reference program for the Apple II computer. Learn BASIC programming techniques, the command sets, and the operating logic of both Integer and Applesoft II Basics in thirteen easy lesson-like sessions. After you have mastered the basics use the permanent reference program to review Applesoft II or just to find out how to use one of those more difficult commands.

**PRICE: \$59.95**

**TITLE: TEACHER CREATE SERIES**

**PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

**DESCRIPTION:** Apple II disks designed for teachers that are not programmers. Helps in the design to CAI lessons for student use.

**TESTING GROUP -** The Apple II Disks that make up the Testing Group are designed to allow teachers to create their own tests without knowing how to program a computer. The testing formats include:

- MULTIPLE CHOICE TESTS
- TRUE OR FALSE TESTS
- COMPLETION TESTS
- MATCHING TESTS
- SPELLING & PARTS OF SPEECH

Each of these Disks provides you with the following features:

- \*Create tests, up to 100 questions each
- \*Alter test questions and answers
- \*Print out a copy of any test.
- \*Erasing tests
- \*Evaluation of student progress.

Answers are randomly shuffled each time the test is taken or a new copy is printed out. All tests reflect your subject needs, your level of difficulty, your flavor and style of teaching, since you created the tests.

**QUESTION & ANSWER GROUP**

This group of disks are written in the question/answer format. You can add you own lessons in any subject at any level, with your style. You can alter any of your lessons at any time, or erase a lesson if you wish. Some of the disks in this Q/A group include:

- \*American history - colonial period - wars - national expansion - presidents+
- \*General biology - plants - animals - hormones - digestion +
- \*General Chemistry - the elements - ions - crude oils - compounds+



\*Create your own subject disks.

PRICE: \$32.00/disk      \$140.00/five

**TITLE: TEACHERS' AIDE I AND II**

**PUBLISHERS NAME: EDUCATIONAL SOFTWARE PROFESSIONALS, LTD.**

**DESCRIPTION:** TEACHERS' AIDE I and II allows the teacher to construct quizzes and tests which are stored on the disk as text files. The teacher then has complete control over the editing and revision of these files. It also, allows individual students to take the teacher constructed quiz or test on the computer and then automatically saves the individual student's score to a score file created by the teacher.

**PRICE: \$19.95**

**TITLE: THE ADAPTABLE SKELETON**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** Comes with several illustrative screens, intended to provide the teacher ideas as to how best to use the multiple-choice format and built-in flexibility of this very adaptable software.

**PRICE: \$34.95**

**TITLE: THE CLASSROOM MONITOR**

**PUBLISHERS NAME: SOFTWARE CONNECTIONS**

**DESCRIPTION:** The Classroom Monitor is an educational/training software package which brings the advantages of local area networks to the classroom.

The Classroom Monitor creates a powerful teacher's work station which will control and monitor a classroom of 64 Apples on an Omninet network. In addition, the teacher's work station will act as a shared peripheral controller, providing the network with disk sharing and printer sharing capabilities.

With The Classroom Monitor the teacher can:

1. Set up a programming demonstration on one student Apple and allow all other student Apples to monitor that screen.
2. Look at any student's display on the teacher's monitor.
3. Download every student station from a single diskette located on the teacher's disk drive.
4. Allow students to share the use of peripherals.

Markets for the product include education (Primary through University) and training. Examples of applications may be computer labs teaching programming, computer aided classrooms, and training programs which utilize the computer.

Allowing control from a central station will facilitate teaching and training. The teacher will now be able to demonstrate a programming procedure or any exercise on one Apple and send the video display to all other Apples in the classroom. This means no more large video displays or trying to crowd a class of students around a single Apple monitor.

The teacher will also be able to look at any video display in the classroom without leaving his/her desk. A few keystrokes will bring any student display to the central monitor, and the teacher may then watch as the student progresses through the exercise without disturbing that student's work.

The teacher may also download a BASIC program into any or all Apples in the classroom from a single disk drive attached to his/her station. It will be easier to manage diskette distribution since only one copy will be needed for the network. There is less chance of losing or mishandling diskettes.

This same diskette attached to the teacher's disk drive may also be accessed simultaneously by student's from their own work



stations. This resource sharing capability eliminates the need for separate disk drives on each student station, thus reducing hardware expenses.

Yet the teacher still has the option to install up to 6 disk drives on the central station as well as up to 4 disk drives on each student station.

In addition to saving disk drive costs, the software will also allow all stations to share the use of a common printer. Spooling, however, is not available in this product release. Nor is the product compatible with the Corvus Omninet hard disk.

However, both spooling and hard disk compatible features will be available on future revisions of the product.

**PRICE: \$375.00**

**TITLE: THE ELECTRONIC TOOL**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** A strikingly different computer literacy program! The student-user is given the opportunity to learn how computers:

- (1) Store data
- (2) Select and retrieve records
- (3) Reorganize records in files
- (4) Perform various calculations
- (5) Can be used as teaching tools
- (6) Can simulate real world conditions

The material is presented in a non-technical manner, in terms meaningful to students at the seventh grade level and beyond.

The program introduces the student to a number of common data processing terms. Clever graphics and schematics are used to help the student gain a mental picture of certain essential concepts.

The student is taught what a computer record is, and is then given a chance to build a few, thereby constructing a computer file. The program then uses this file to demonstrate how the computer can retrieve specific records, and reorganize them.

A variety of calculation possibilities are demonstrated. The program also demonstrates one way computers are used as a teaching tool - presenting the student with a number of drill and practice exercises, in language arts as well as mathematics.

The student can choose to see either of two simulations. One is an ecology study involving the interaction of two animal populations. The other involves predicting job success from personality traits. In both, the student is invited to enter the critical variables - and to observe "what if...!"

**PRICE: \$34.95**

**TITLE: THE GAME SHOW**

**PUBLISHERS NAME: COMPUTER ADVANCED IDEAS**

**DESCRIPTION:** This highly entertaining educational program features a multi player game using animated color graphics. The Game Show starts by introducing you to your partner on the screen. Your partner then gives you clues to help you guess the mystery word or phrase.

The Game Show comes complete with numerous topics including:  
Vocabulary (elementary through advanced)

History

Algebra I

Sailing

Computer Terms

The Game Show also includes an authoring system that allows you to easily add your own topics. To add your own subject area, you need only answer three questions, then type in your mystery words and clues. The Game Show comes with complete

documentations, a one year warranty, and a back-up disk.  
**PRICE: \$45.00**

**TITLE: THE GHOSTWRITER AUTHORIZING SYSTEM**

**PUBLISHERS NAME: CAVRI SYSTEMS**

**DESCRIPTION:** With this new system, an author can create interactive video lessons without using a computer programming language. On the basis of the author's typed responses to The Ghostwriter's questions, The Ghostwriter produces a complex, sophisticated, and polished interactive video program.

Posing questions on the TV screen, The Ghostwriter first assists the author to structure a lesson outline by prompting the author to name and then construct a series of "presentations" of teaching material interspersed with "interactions" that require an active response from the student. "Presentations" are made up of a sequence of text pages, video segments, and /or high resolution graphics. "Interactions" display a question or menu of choices, request a student response, and then continue the program at a specified point in the lesson dependent on the answer given by the student.

It is not necessary either to create or change the program in the actual order in which it will be presented to the student. An outstanding feature of the new authoring system is the great ease with which it allows modification of completed programs. Furthermore, the author may test video segments immediately upon defining them.

Another special feature of The Ghostwriter is its branching capability. Authors may specify an unlimited number of points in the lesson to which the student may branch. The program compares a student's answers to a series of possible answers determined by the author. It checks for synonyms, forgives spelling mistakes, and allows compound answers. The program can also serve as a scorekeeper for student responses as well as track student progress through the course(s). The student may track the lesson at any time and later be automatically returned to the point at which the lesson was interrupted.

The system is compatible with most commercially available graphics or text font packages, and there is complete support of high resolution graphics.

The Ghostwriter package includes a comprehensive text editor-word processor with which the author can create text pages. This feature allows the author to type in the lesson text exactly as it will later appear on the screen. The system has a comprehensive set of text control functions, including cursor control and the ability to center lines, and to insert or delete characters, lines or text.

Once created, the lesson goes through a verification process which checks for author mistakes and points out those errors in an easy to read display. The lesson is then passed through a process which compacts and reorganizes it and then generates a clear listing of all presentations, interactions, branches and other lesson components for review or modification.

**PRICE: \$2,200.00**

**TITLE: THE LEARNING BOX**

**PUBLISHERS NAME: FULLMER ASSOCIATES**

**DESCRIPTION:** A general purpose drill program in game format like tic-tac-toe to teach facts for logic e.g., spelling, math, grammar, I.Q. tests, etc. Grades 1 thru 7. Program was selected as regional finalist in Johns Hopkins First National Search for Computer Aids to the Handicapped. Instructor uses word editor provided to input 25 answers. Instructor can also print answers

and/or master question list to be used with game. Number of 25-questions drills limited only by disk storage. Printer optional. Sample drills provided with programs. Lots of color and sound.  
**PRICE: \$50.00**

**TITLE: THE LEARNING SYSTEM**  
**PUBLISHERS NAME: MICRO LAB**

**DESCRIPTION:** A company or educator may prepare a training/tutoring/testing device. Enter instructions or information; then key it to a tutorial drill or test to check for learning comprehension. Use column match, multiple choice, or fill-in formats. Complete scoring allows student analysis and a question validity check.  
**PRICE: \$150.00**

**TITLE: THE MICROCOMPUTER AS A TEACHER TOOL**  
**PUBLISHERS NAME: SVE - SOCIETY FOR VISUAL EDUCATION, INC.**

**DESCRIPTION:** This program is an in-service training course designed for elementary and junior high school teachers with little or no computer experience. The course comprised of two filmstrips with cassettes, one disk and workbook assumes no technical knowledge as it introduces the microcomputer and provides step-by-step operational instructions. Through both discussion and hands-on experience, the course stresses the potential and teaching possibilities inherent in this new educational technology.

**Program Features:**

- Introduces practical ways in which the microcomputer can supplement classroom instruction
- Details six kinds of educational computer programs
- Provides hands-on computer experience in a user-friendly way
- Introduces instructional strategies via six sample lessons which have a programming code open for inspection therefore encouraging users to adapt subroutines from these lessons for their own classroom use.

The disk will provide on line lessons as follows:

- Introduction to the Apple
- Introduction to Computer Assisted Instruction for Teachers
- Science lesson: Wind Chill
- Math lesson: Area of Rectangles and Cubes
- Music: Rhythm Writer
- American History lesson: The Election of 68
- English Lesson: Reading Comprehension

The two filmstrips with cassettes introduce key terms, operations and concepts.

Filmstrip #1: Introduction to Microcomputers

Filmstrip #2: Classroom Uses for Microcomputers

The disk gives teachers the opportunity to implement those concepts. The disk program includes four major kinds of educational software, therefore suggesting ways in which the microcomputer may be integrated into the classroom as supplemental material.

The workbook will contain lesson description, notes regarding instructional design, programming techniques and explain the six instructional strategies: simulation, tutorial, problem solving, timed exercise, and reiterative drill and practice.

**PRICE: \$99.50**

**TITLE: THE NEW STEP BY STEP**  
**PUBLISHERS NAME: PROGRAM DESIGN, INC.**



**HARDWARE REQUIREMENTS: Voiced cassette recorder- not attached to computer**

**DESCRIPTION:** Ages junior high to adult

The 33-program course includes two disks, two audio cassettes and a workbook. All materials are housed in a vinyl binder. The audio cassettes supply voiced instruction at the same time that the computer illustrates BASIC program concepts using sound, graphics, and animation. The workbook contains lesson summaries, practice problems and sample programs.

**PRICE: \$79.95**

**TITLE: THE PROFESSIONAL INFORMATION MANAGER**

**PUBLISHERS NAME: CAVRI SYSTEMS**

**HARDWARE REQUIREMENTS: selected VCR and color monitor with audio**

**DESCRIPTION:** An interactive video authoring program addressed to professional and management level users. Also useful for medical or quality control studies. The user always has complete control from the Apple keyboard over what video material is displayed and may, at any time, branch ahead or back on tape or text. A routine to display a table of contents of the video material as well as a means of recording and storing observations about the video material are provided.

**PRICE: \$495.00 (software only)**

**TITLE: THE PROFESSOR**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Professor is a universal teaching program designed to teach almost any subject. The teacher can "teach" The Professor his subject in pre-programmed lessons and then the student can work at his or her own pace to master the subject. It can be used to review second grade spelling words or advanced Physics for your college sophomore. This is a great mid-term aid used by many schools and colleges.

**PRICE: \$29.95**

**TITLE: THE TERRAPIN TURTLE**

**PUBLISHERS NAME: TERRAPIN PRODUCTS**

**DESCRIPTION:** What is a Terrapin Turtle? A Terrapin Turtle is a robot. It is a computer-controlled peripheral device which has blinking eyes, beeps in two tones, draws with a solenoid-controlled pen, and moves on two separately controlled wheels. Most important, the Terrapin Turtle has a sense of touch. It's small, 8"by 8" by 5", and connects to a computer through its umbilical cable.

Why a Turtle? It's educational, and it's fun. A Terrapin Turtle will open a new world to you and your students. Turtles are good for teaching and learning because they are: approachable, understandable, tangible.

The Terrapin Turtle was designed for learning about logic and other types of structured thinking, and not for doing repetitive drills, such as math or spelling quizzes.

A Terrapin Turtle will help you and your students learn powerful fundamental concepts. These concepts include state, control, and recursion.

What makes a Terrapin Turtle so special? Turtles are approachable. They put a friendly face on the computer. The first step in learning about computers is to allay the fear of computers and Turtles do that. As very small robots, they amuse and create interest without frightening.

Turtles are also understandable. You don't have to know how to program, do geometry, calculate complex series or do business



analysis to understand what the Turtle will do when you say "FORWARD 10". This means you can learn the fundamentals of programming without worrying about the intricacies of some other discipline.

Turtles are real, not abstract. You can see them, hear them, and even touch them as they march around as instructed by your computer program. An error in the program is immediately visible by simply watching what's happening, as it happens. You can't do this with an abstract computer program. When was the last time you saw the electrons running around inside the computer? With a Terrapin Turtle, you see exactly what happens every time. No longer is the computer a mysterious black box. This is particularly important when dealing with young children.

Turtles are fun. Whether you use the for learning, demonstrations, or amusement, Turtles are fun. They stimulate the imagination.

How is a Terrapin Turtle controlled? You hook it up to your computer, and then enter instructions. A set of Turtle commands is created in any language in which you're comfortable: in machine, assembler, BASIC, FORTRAN, etc. Most people use commands like PENUP, PENDOWN, FORWARD 10 AND RIGHT 90. Our pamphlet, "Using BASIC to control your Turtle" tells you how to use these commands. And for beginners we offer a special Terrapin Software Package at a very modest cost.

What is needed to run a Terrapin Turtle? A digital computer of any kind: a micro, a mini, or even a main frame. The type of computer isn't important. We've had Turtles hooked up to Apples.

How is a Terrapin Turtle hooked up?(Interfacing) The Terrapin Turtle needs an interface to understand computer commands. It also needs a power supply as most computers cannot supply enough power. Terrapin currently offers several easy-to-use interfaces for the Apple. The Apple interfaces include Turtle Talk software which uses commands such as "Forward" and "Right Turn" allowing easy control of the Turtle.

Turtle interfaces provide 13-16 Volts DC at 1.5 amps and 12 control wires (8 for controlling the turtle and 4 for reading the touch sensors). Standard TTL levels are used for control. Please call us if you have any questions about interfacing with your computer.

Who invented the Terrapin Turtle? The robot turtle was originally invented by Grey Walter in England in the 1940's. The modern Terrapin Turtle was designed by Dan Hillis of MIT's Artificial Intelligence Lab. It is currently used by schools, colleges, universities and research labs around the world, as well as by private Turtle owners. The Terrapin Turtle has been featured on television and in Byte, Creative Computing, Interface Age, the Wall Street Journal, Popular Electronics, Popular Mechanics, and many others.

**PRICE:**

**TITLE: THE TEST WRITER**

**PUBLISHERS NAME: C.F. CICCARELLA**

**HARDWARE REQUIREMENTS: Printer using 8.5 inch or wider paper**

**DESCRIPTION:** Test Writer creates equivalent form examinations and tests from a pool of questions prepared by the instructor. It is particularly suited for use in courses which are offered frequently or by several different instructors as it allows standardization and consistency in testing cognitive material without ever repeating the same examination.

**Features:**

\*Supports multiple choice, true-false, fill-in, and essay questions.

- \* Full upper and lower case printout is supported.
- \* Easy editing of questions.
- \* Teacher's choice of test length.
- \* Selection of questions from a portion of the question pool for quizzes.
- \* Nearly infinite number of equivalent forms.
- \* Prints heading, instructions, question values, and answer key.
- \* User friendly operation (No computer background needed).

**Package Contents:**

- 1 locked diskette containing the program.
- 1 blank diskette for your question pool.
- 1 detailed instruction manual.

**PRICE: \$35.00**

**TITLE: TYPING TEACHER**

**PUBLISHERS NAME: COMPU-TATIONS**

**DESCRIPTION:** A hands on educational program which utilizes behavioral learning principals to teach anyone to master the typewriter or keyboard. Written by a behavioral psychologist, the program concentrates on drill, practice and reinforced learning through eight phases of instruction.

In each of the eight phases or practice levels, there are ten exercises to be completed at the student's own pace. The screen displays the relevant keyboard positions and where to place your fingers. The student is asked to successfully type for repetitions of each of ten exercises.

**PRICE: \$19.95**

**TITLE: VOTER 30**

**PUBLISHERS NAME: REACTIVE SYSTEMS, INC.**

**DESCRIPTION:** The Voter 30 is an audience or student response system connecting as many as 30 six-button keypads to a single Apple II computer.

The system permits all participants to react to instructional or promotional material presented by the computer or the group leader. The Voter 30 comes with software routines to assist in the development of educational lessons, and well as the storage retrieval to student responses, either on a question-by-question basis or on a student-by-student basis.

The system enhances educational presentations by giving every member of the audience an active, participatory role. It also gathers information, either by giving students tests or through use in market research applications.

**PRICE:**

**TITLE: WILL 'O THE WISP**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A complete Adventure-type game that takes you through forests, caves, and castles to the den of Ralph, the Magician. You follow the Will 'O Wisp (which sometimes leads correctly, and other times leads you into dangerous turf). Illustrates the principles involved in writing your own Adventure games.

**PRICE: \$19.95**

**TITLE: Z.E.S. SYSTEM OF COMPUTER AIDED INSTRUCTION**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Z.E.S. is not a language, but a completely menu driven system that features:

- \* full lesson creation/amendment facilities

- \* high resolution graphics and animation in color
- \* cartesian graphs
- \* full error checking, field delimiters and prompting
- \* provisions for hints in each question
- \* up to 4 answers for each question
- \* comments both from instructor to student, and from student to instructor
- \* branching to revision questions when the student gets a basic (normal) question wrong. (Up to 9 revision questions for each normal question.)
- \* ABSOLUTELY NO PROGRAMMING KNOWLEDGE REQUIRED
- \* elaborate student record keeping including:
  1. the student's general status on the lesson
  2. summary of the student's performance (questions attempted, # correct, # incorrect, hints taken, average response time, most difficult question)
  3. detailed report (question number, whether a hint was taken, time required to answer, incorrect or correct answer)
  4. student's answers (question, correct or incorrect answer, and the actual answer given)
  5. classreport (including mark analysis, response time analysis, and/or difficult questions and analysis (based on response time))

PRICE: \$250.00 four disks

\$ 20.00 demonstration package

## ENGLISH/GRAMMAR

### **TITLE: A2-ED1 WHOLE BRAIN SPELLING**

**PUBLISHERS NAME: SUBLOGIC COMMUNICATIONS, INC.**

**DESCRIPTION:** Designed to help the user develop internal visualization skills for improving spelling, in a manner as entertaining as it is educationally sound. It effectively utilizes the graphic color capabilities of the Apple II to provide positive user-feedback and to emphasize visual aspects of the learning process. The program includes sections on lesson operation, goals, study and practice words. 2,000 practice spelling words in 200 lists are included, organized in order of increasing spelling difficulty. For ages 8-adult. Supplementary word lists are also available.

**PRICE: \$34.95**

### **TITLE: ABC**

**PUBLISHERS NAME: MERRY BEE COMMUNICATIONS**

**DESCRIPTION:** Alphabet recognition and identification. Developed by experts in education and instructional design. Field tested by subject area specialists.

**PRICE: \$29.95**

### **TITLE: ADVERBS**

**PUBLISHERS NAME: CONVERGENT SYSTEMS, INC.**

**DESCRIPTION: WHAT IS AN ADVERB? (1)**

(1) Identify adverbs in statements and questions. (2) Identify the word and adverb describes in a sentence. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 20 practice items, dividend into three practice sections.

**ADVERB OR ADJECTIVE? (2)**

Distinguish between adjectives and adverbs in statements and questions; use adjectives and adverbs according to the type of verb used in the sentence. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 15 practice items, dividend into three practice sections.

**PRICE: \$30.00**

### **TITLE: ALEXANDER THE GREAT**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION:** Vocabulary building in a fantasy game context. Based on the Sword of Zedek. Alexander the Great introduces Aristotle as a mentor to the player. When called on, Aristotle poses vocabulary questions, and depending on the speed and accuracy of the player response, confers secret information. With Aristotle as an ally, the quest to overthrow Ra, The Master of Evil, assumes a new dimension of complexity. Players may select the level of vocabulary difficulty.

**PRICE: \$39.95**

### **TITLE: ALPHABETIZE**

**PUBLISHERS NAME: FULLMER ASSOCIATES**

**DESCRIPTION:** Grades 1 thru 4. Authoring program gives student practice in sorting words according to alphabetical sequence. Good for word recognition, spelling. Instructor inputs 5 sets of 15 words using provided word editor program. Computer randomizes words and presents for student sorting. Program explains how to sort, grades student progress. Can be customized for numeric sort.



**PRICE: \$50.00**

**TITLE: ALPHARETTA**

**PUBLISHERS NAME: MERRY REE COMMUNICATIONS**

**DESCRIPTION:** Alphabetizing and beginning dictionary skills - ages 5-10. Developed by experts in education and instructional design. Field tested by subject area specialists.

**PRICE: \$29.95**

**TITLE: ANAGRAMS I (RECREATIONAL 1)**

**PUBLISHERS NAME: MICROPHYS PROGRAMS**

**DESCRIPTION:** Microphys is pleased to release a series of Anagram programs designed for use in both a recreational and educational setting. Employing a game format, each program randomly generates large-type anagrams which are to be deciphered. Points are awarded for correct solutions and clues may be displayed when difficulty is encountered. One tries to interpret as many anagrams as possible within the allotted time which is also displayed on the computer screen.

Match play may be established since the computer may be directed to generate the same sequence of anagrams for two or more players. The time interval may also be adjusted in order to compensate for age or intelligence differences.

The Anagram programs are available in five "level-of-difficulty" categories. The clues provided in the school and college categories are generally definitive in nature. Thus, vocabulary, reading, and spelling skills are reinforced by these programs. Many of the words used are found in the Microphys vocabulary and spelling series for the corresponding grade levels.

Available levels: ANAGRAMS I (RECREATIONAL 1), ANAGRAMS II (RECREATIONAL 2), ANAGRAMS III (COLLEGE 1), ANAGRAMS IV (COLLEGE 2), ANAGRAMS V (HIGH SCHOOL 1), ANAGRAMS VI (HIGH SCHOOL 2), ANAGRAMS VII (JUNIOR HIGH 1), ANAGRAMS VIII (JUNIOR HIGH 2), ANAGRAMS IX (ELEMENTARY 1) and ANAGRAMS X (ELEMENTARY 2).

**PRICE: \$15.00 per level**

**TITLE: BASIC READING SKILLS**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** A set of five challenging activities help children develop vocabulary, spelling, synonyms and antonyms, hard/soft consonant, short vowel, and sight reading skills. Teachers can easily change the content of the activities from time to time in order to meet their curricular needs.

**VOCABULARY QUIZ GAME:** Students have fun learning while earning ten to a hundred play bucks per word when they select the correct meaning in the multiple choice game. The game has three levels of difficulty.

**WHAT WAS THAT WORD?:** Children develop sight reading and spelling skills when they play this game for play money. After each word flashes on the TV screen the player must type the "flashed" word. Has two levels of difficulty.

**GAME OF SYNONYMS AND ANTONYMS:** A challenging true/false game where players try to reach the top of a scale by selecting the correct response to statements about synonyms and antonyms. Three levels of difficulty.

**SHORT VOWEL BOX:** Students learn quickly as they play this electronic crossword puzzle activity. The puzzle uses only three-letter words with a consonant-vowel-consonant pattern.

**OTHER FEATURES:**

\* A manual is included with each order.

- \* Up to 12 students per disk can be registered.
- \* Disks are reusable-- a teacher can delete student records and register new students.
- \* A special progress report disk is included with each order.
- \* A special content management disk is also included with each order.
- \* Students progress at their own pace, progress automatically, and based upon student performance.
- \* Teachers can manually change a student's progress level to any one of thirteen levels.

BASIC READING SKILLS is designed for a lab setting in which one Apple II has two Disk II units and a printer for progress reports and content management.

**PRICE: \$260.00 Complete Package**  
**\$ 16.00 For each additional student disk**

**TITLE: CODE BREAKER**

**PUBLISHERS NAME: PROGRAM DESIGN, INC.**

**HARDWARE REQUIREMENTS: Voiced cassette recorder- not attached to computer**

**SUB-CATEGORY: English/Grammar**

**DESCRIPTION: Ages 10 to adult**

3 scrambled message games of increasing difficulty that build basic word handling skills needed for good writing. First game scrambles letters within the words in the message. Next 2 games scramble letters and also word order. The last game gives the hardest messages. Messages are made up by the computer from an extensive word list.

**PRICE: \$23.95**

**TITLE: COLOR GUESS**

**PUBLISHERS NAME: IDEATECH CO.**

**DESCRIPTION: Teaches the reading and spelling of color words associating the color with the correct color word as displayed on the screen.**

Color Guess gives the student an opportunity to learn to read and to spell ten color words. During the introduction, a smiling face and the matching color word are shown in Low-Res graphics. The student may choose to watch as each of the ten faces and color words are shown or may choose to proceed to the reading or spelling portion of the program. During the reading segment of the program, a face is presented with three color words printed in the text mode. The student associates the color of the face to one of the words by typing the appropriate color word. During the spelling segment the student is shown a face and must type the color word from memory. After each correct response the face will smile, the color word will appear in graphics and one of four reinforcements will occur. If the response is incorrect, the face will frown and the correct color word will appear.

**Grade level: Preschool-2.**

**PRICE: \$14.45**

**TITLE: COMMAS**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION: The COMMAS program states the rule related to each of twelve common uses of the comma. Each use is in turn illustrated, and then an opportunity is afforded the student to apply the rule to a number of exercises. The rules covered deal with:**

- (1) Items in a series
- (2) More than one adjective

- (3) Nouns in a direct address
- (4) Titles and degrees
- (5) The adverb "too"
- (6) Interrupting elements
- (7) Successive independent clauses
- (8) Introductory clauses and phrases
- (9) Nonessential modifiers
- (10) Explanatory words and phrases
- (11) Contrasts and alternatives
- (12) Long phrases of identification

The program alerts the student to the fact that the implementation of certain rules may vary from one text or teacher to the next and may even change merely with the passage of time! The rules are presented more as "guidelines", to help make meaning clear, and not to unnecessarily restrict the writer.

The rules are presented in the form of a menu, making it easy to start today's review where appropriate. The student can cause the program to present as many (or as few) drill and practice exercises as desired, being able to stop or to return to the menu after working each exercise. In addition, while working the exercises the student can ask to see the rule stated again, to reinforce his or her understanding on the spot!

**PRICE: \$29.95**

**TITLE: COMPREHENSION POWER PROGRAM**

**PUBLISHERS NAME: INSTRUCTIONAL/COMM TECH, INC.**

**DESCRIPTION:** A computer-based reading improvement program which inductively develops 25 major comprehension and study skills through preview skimming and comprehensive reading practice in the areas of literal understanding, interpretation, evaluation, appreciation, and analysis.

The program contains 108 reading selections on reading levels 4 through 12. Each level consists of 12 lessons on 4 disks. The high-interest reading content includes adventure, contemporary issues, sports, biography, career/consumer awareness, literature, life adjustment, etc. Lessons can be individualized to meet each student's needs.

The management system on each disk includes provisions for lesson assignment and skill analysis for up to 100 students. The skill analysis provides a basis for prescriptive skill reinforcement in the reading lab or classroom. A Correlation Guide directs the student to follow-up skill reinforcement in I/CT's Critical Reading (CRL) Ensembles. These ensembles, which provide directly correlated skills support, are available of reading levels 2 through 12.

**PRICE:**

**TITLE: CONJUNCTIONS**

**PUBLISHERS NAME: CONVERGENT SYSTEMS, INC.**

**DESCRIPTION:** Identify coordinating, subordinating and correlative conjunctions in questions and statements. Review practice/drill lesson, reinforcement feedback, forced correct response; 15 practice items.

**USING CONJUNCTIONS (2)**

Determine the correct conjunction to use according to the sentence's meaning. Review practice/drill lesson, reinforcement feedback, forced correct response; 28 practice items.

**PRICE: \$30.00**

**TITLE: CRITICAL READING**

**PUBLISHERS NAME: BORG-WARNER EDUCATIONAL SYSTEMS**



**DESCRIPTION:** The MicroSystem80 Critical Reading courseware series is an individualized, supplemental program designed to introduce students to the fundamental skill of critical thinking.

So often, teachers have told us that, while many of their students are able to "read" in the sense that they can translate words into sounds and may even know what individual statements of a paragraph mean, they often have difficulty relating those individual ideas within a paragraph to the more comprehensive whole. The purpose of Critical Reading is to help those students to master rules of inference that will help them to a better understanding of written material.

Each level of Critical Reading begins with a pretest to determine precisely where a student should begin working in the program and concludes with a post-test to assess mastery. The reading settings in which each rule of inference is used progress from simple, two-sentence presentations to longer, more complex paragraphs. Each rule is taught by example; first, in the simplest setting, and then in contexts which grow increasingly more demanding.

So, the design of the program leads the student through a hierarchy of skills and levels of difficulty. Critical Reading not only will help students master rules of inference, but will also help them develop an understanding of the meaning of paragraphs while they strengthen their general comprehension skills.

Although there are variations, Critical Reading follows a format that presents frames of informative material that vary from simple, two-sentence expositions to longer, more complex paragraphs. Underneath each frame of informative material, a statement will appear on the screen. Based on available information, the student must determine whether the statement is true, false, or whether there is not sufficient information provided to tell for sure.

In this example, the student is given one conditional statement and is asked to understand this sentence by evaluating four possible situations based on the information provided in the conditional statement. The student receives directional reinforcement for each response as well as an explanation of the correct answer.

The material gets progressively more difficult as the student works through the Critical Reading unit. In this example, the student must analyze a paragraph containing two conditional statements as well as additional information that is not relevant to those statements. The student receives an explanation which will reinforce a correct response or provide specific direction in the case of an incorrect response.

Each series comes with management system and Teacher's Guide.

<b>PRICE:</b>	<b>Series A-H includes 8 disks</b>	<b>\$750.00</b>
	<b>Series A-D includes 4 disks</b>	<b>\$350.00</b>
	<b>Series E-H includes 4 disks</b>	<b>\$400.00</b>

**TITLE:** EARLY WORDS

**PUBLISHERS NAME:** MERRY BEE COMMUNICATIONS

**DESCRIPTION:** Sight vocabulary - ages 5-7.

**PRICE:** \$19.95



**TITLE: ENGLISH AS A SECOND LANGUAGE**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** From Brigham Young University, this instructional package will be composed of up to 60 diskettes. Materials are suitable for English language or remedial English grammar study.

**PRICE:**

**TITLE: ENGLISH GRAMMAR**

**PUBLISHERS NAME: MICROPI**

**DESCRIPTION:** This is a series of drill programs in English grammar totaling about 20-25 hours of instruction. We offer this in five segments or as a package.

**PRICE: \$100.00 each segment**

**\$400.00 package**

**TITLE: FACT FUN**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** A companion product to Word Fun which uses a multiple choice format for answers. Like Word Fun, it is very simple to add new questions or change the questions (and answers). Both of these programs use text files on disk to store questions and answers which means it is not necessary to know anything about programming to change the information being tested. Scoring is done by the Apple and any questions missed are repeated for drill.

**PRICE: \$19.95**

**TITLE: FRY READABILITY PROGRAM**

**PUBLISHERS NAME: JAMESTOWN PUBLISHERS**

**DESCRIPTION:** Automatically determines reading grade level of any material entered on screen using standard typing procedures. Range: reading levels 1-17. Yields results for up to one hundred 100-word passages. Results are shown on screen as well as displayed graphically on Fry Readability Graph.

**PRICE: \$45.00**

**TITLE: GAME OF HARD/SOFT CONSONANTS**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** A challenging game where players try to reach the top of a scale by selecting the correct response to statements about hard or soft consonants. Uses words supplied by the teacher.

**PRICE: \$20.00**

**TITLE: GAME OF SYNONYMS AND ANTONYMS**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** A challenging true/false game where players try to reach the top of a scale by selecting the correct response to statements about synonyms and antonyms. Uses pairs supplied by the teacher.

**PRICE: \$20.00**

**TITLE: GAME POWER FOR PHONICS**

**PUBLISHERS NAME: WISE OWL WORKSHOP**

**DESCRIPTION:** Special games for virtually every structural or phonetic part of words. An encyclopedic 1280 game system for home or school use. Meets I.E.P. requirements.

**PRICE: \$24.50 tape**

**\$28.50 disk**

**TITLE: GRAMMAR PROBLEMS FOR PRACTICE - HOMONYMS**

**PUBLISHERS NAME: MILLIKEN PUBLISHING**

**DESCRIPTION:** There are five modules in the Grammar Problems for Practice package covering skills that are generally introduced in the thirds through sixth grades.

These modules provide interesting and extensive practice in troublesome grammar and usage areas. Generally, each module consists of practice exercises followed by a post-test; however, the types of exercises and flow of work will vary due to the nature of the curriculum in each module. The Homonyms module, for example, begins with a pre-test of the words covered in the assigned lesson. If mastery is demonstrated, the student proceeds to the next lesson. If not, the student can either review definitions of the homonyms that were missed or work practice exercises. These exercises provide immediate feedback and reinforcement. The student also has access to a "help" option whenever an incorrect response is entered. Once the practice exercises are completed, the student must demonstrate mastery on a post-test before advancing to the next lesson. The verbs module, on the other hand, does not have a pre-test and the activities are completely different, but the movement from practice exercises to a post-test is the same.

Each disk in the Grammar Problems for Practice package contains a Manager Program which allows teachers to maintain records for up to 100 students. The teacher can make individual assignments, review student performance, and identify student problem areas. Hard-copy print-outs may be generated. The Manager Program keeps all data confidential.

Specific activities will vary based on the module being used. For the most part, student activity is self-paced and students have access to a "help" option, except with pre- or post-testing exercises. The highly motivating activities provide immediate feedback and reinforcement.

**FEATURES:**

- \* highly motivating activities
- \* "help" for student having problems
- \* pre- and post-testing, where appropriate
- \* teacher management program
- \* all data kept confidential
- \* comprehensive documentation

**I - IV (GR. LEVELS 3-9)**

**CONTRACTION HOMONYMS (GR. LEVELS 5-9)**

**TRIPLE HOMONYMS (GR. LEVELS 5-9)**

**CONFUSING PAIRS (GR. LEVELS 6-9)**

**PRICE: \$80.00 2 disk set**

**TITLE: GRAMMAR PROBLEMS FOR PRACTICE - MODIFIERS**

**PUBLISHERS NAME: MILLIKEN PUBLISHING**

**DESCRIPTION:** I - IV (GR. LEVELS 3-9)

\* MAKING COMPARISONS (GR. LEVELS 4-9)

**PRICE: \$80.00 2 disk set**

**TITLE: GRAMMAR PROBLEMS FOR PRACTICE - PRONOUNS**

**PUBLISHERS NAME: MILLIKEN PUBLISHING**

**DESCRIPTION:** USING CORRECT CASES (GR. LEVELS 3-9)

ANTECEDENT AGREEMENT (GR. LEVELS 3-9)

**PRICE: \$80.00 2 disk set**

**TITLE: GRAMMAR PROBLEMS FOR PRACTICE - SPELLING**  
**PUBLISHERS NAME: MILLIKEN PUBLISHING**  
DESCRIPTION: MAKING PLURALS (GR. LEVELS 3-9)  
ADDING ENDINGS (GR. LEVELS 3-9)  
SPECIAL VARIATIONS (GR. LEVELS 3-9)  
**PRICE: \$80.00 2 disk set**

**TITLE: GRAMMAR PROBLEMS FOR PRACTICE - VERBS**  
**PUBLISHERS NAME: MILLIKEN PUBLISHING**  
DESCRIPTION: I - IV (GR. LEVELS 3-9)  
IRREGULAR VERB PAIRS (GR. LEVELS 3-9)  
SUBJECT VERB AGREEMENT (GR. LEVELS 3-9)  
**PRICE: \$80.00 2 disk set**

**TITLE: HOMONYMS**  
**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**  
DESCRIPTION: Each disk contains lessons at five different reading levels (3-8).  
There are 17 tutorial/drill lessons and 3 review lessons. In the review lessons students must write the correct homonym in the context of a sentence. Homonyms have been introduced in previous lessons.  
Lessons begin with simple words such as sun/son and gradually increase in difficulty to pairs like cereal/serial, sheik/chic.  
**REGULAR FEATURES**  
\* upper/lower case letters  
\* create  
\* student planning  
\* modify  
\* delete  
**SPECIAL FEATURES**  
\*Student safeguards - 10 successive correct responses or less than 41% (discounting the 1st four frames) terminates the presentation.  
**PRICE: 12-09 Nouns/Pronouns.....\$32.95**  
**12-05 Roots/Affixes.....\$39.95**  
**12-06 Homonyms.....\$39.95**  
**12-07 Antonyms/Synonyms.....\$39.95**  
**12-08 Verbs.....\$32.95**  
**12-12 Verb Usage 1 and 2.....\$49.95**  
**(2 disks)**

**TITLE: JABBERWOCKY**  
**PUBLISHERS NAME: WISE OWL WORKSHOP**  
DESCRIPTION: A fun and educational game. It has two modes of play that can be used to study the parts of speech or it can be played as fun game. The stories in the game can be changed to meet the needs of the parent or teacher. The game can be played by a single person or a small group.  
**PRICE: \$10.00 tape**  
**\$14.00 disk**

**TITLE: LANGUAGE READING DEVELOPMENT**  
**PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**  
DESCRIPTION: A complete course designed to allow you to read quicker and faster with better retention and skills. Several different levels of instructions. A true CAI program that allows one to grow with the program and add their own lessons later. Disk and instruction manual.  
**PRICE: \$175.00**

**TITLE: MAGIC SPELLS****PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Magic Spells is a learning game that transforms the memorization of spelling lists into an adventure complete with castles, treasures, demons, and a sage wizard.

Colorful graphics, music, and large text combine with the game format to hold the player's interest while sharpening spelling skills. It is recommended for children at all reading levels.

**PRICE: \$45.00****TITLE: MONTY (TM) PLAYS SCRABBLE****PUBLISHERS NAME: RITAM CORPORATION**

**DESCRIPTION:** "MONTY (TM) plays Scrabble", has a number of striking features: virtual disk storage techniques allowing a 90K program to run on a 16K microcomputer, tens of thousands of words (an entertaining way to expand your vocabulary!), and selectable skill levels. MONTY(TM) even continues to "think" while you plan your move.

MONTY(TM) computer opponent programs bring new life to recreational software. We hope you have as much fun playing with MONTY(TM) as we had creating him.

**PRICE:****TITLE: MYSTERY WORD****PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION:** An educational word game played between two opponents, you and the computer. One player selects a five-letter word, and the other attempts to guess what it is. When the word is guessed, the roles of the players are reversed. When both players have guessed the word of the other, the player that required the least number of guesses wins. The player guessing may select any five letter word for the first guess. The other player responds with the number of letters (0-5) that are in common between the "MYSTERY WORD" and the word guessed (on a one-for-one basis regardless of letter position).

The game can be played at six different levels; from STUDENT, where the computer uses everyday words and gives 3 letters of the word as a hint, to LEXICOGRAPHER, where a more sophisticated vocabulary is used and no hints are given. You will be promoted from time to time as your performance merits. The current guessing player, game level and guesses (and their letters in common) are always displayed.

**PRICE: \$19.95****TITLE: NOUNS****PUBLISHERS NAME: CONVERGENT SYSTEMS, INC.****DESCRIPTION: WHAT'S A NOUN? (1)**

Identify nouns in statements and questions. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 10 practice items.

**PROPER AND COMMON NOUNS (2)**

Identify proper and common nouns; distinguish between proper and common nouns in statements and questions. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 19 practice items.

**NOUN PLURALS, PART 1 (3)**

Change singular nouns to their plural form by adding -s or -es, according to the ending of the noun in the singular. Combination tutorial and practice/drill, reinforcement feedback, forced



correct response; 18 practice items. Focuses nouns ending in vowels, s/ch/z/zz/sh/x.

**NOUN PLURALS, PART 2 (4)**

Change singular nouns ending in o, f, and y to their plural form. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 15 practice items.

**NOUN PLURALS, PART 3 (5)**

Change singular nouns to their plural forms by applying pluralization rules. Review practice/drill, reinforcement feedback, forced correct response; 16 practice items.

**COLLECTIVE NOUNS (6)**

Identify collective nouns in questions and statements. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 13 practice items.

**PRICE: \$49.00**

**TITLE: OPPOSITES**

**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** The format is very similar to a number of standardized tests. You may use the words provided or add you own.

This is an excellent program for improving a student's vocabulary. The lessons begin at the third grade level and build to the 10th level. In each lesson, the words that are missed are repeated at the end of the lesson.

**REGULAR FEATURES**

- \* student planning
- \* create
- \* modify
- \* upper/lower case

**PRICE: \$29.95**

**TITLE: PHRASES AND CLAUSES**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Classification of phrases and clauses, adjectival, adverbial usage, parts of speech.

**PRICE: \$29.95**

**TITLE: POETRY**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Simple poetic forms including limericks, cinquain, acrostic classification and comparison of poems.

**PRICE: \$29.95**

**TITLE: PREPOSITIONS**

**PUBLISHERS NAME: CONVERGENT SYSTEMS, INC.**

**DESCRIPTION:** Uses prepositions correctly in statements. Review practice/drill lesson, reinforcement feedback, forced correct response; 31 practice items.

**PRICE: \$15.00**

**TITLE: PRONOUNS**

**PUBLISHERS NAME: CONVERGENT SYSTEMS, INC.**

**DESCRIPTION: PRONOUNS IN THE NOMINATIVE CASE (1)**

Identify pronouns in the nominative case; use pronouns in the nominative case in questions and statements. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 17 practice items.

**PRONOUNS IN THE OBJECTIVE CASE, PART 1 (2)**

Identify pronouns in the objective case; use pronouns in the objective case in questions and statements. Combinations tutorial and practice/drill, reinforcement feedback, forced correct response; 12 practice items.

**PRONOUNS IN THE OBJECTIVE CASE, PART 2 (3)**

Use objective pronouns in clauses that contain comparisons; distinguish when to use nominative pronouns and when to use objective pronouns. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 11 practice items.

**WHO OR WHOM? (4)**

Determine when to use whom in questions and statements. Combination tutorial and practice/drill, reinforcement feedback, forced correct response, 11 practice items.

**PRICE: \$49.00**

**TITLE: PUNCTUATION SKILLS: COMMAS NO. 7879**

**PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Program includes introductory elements, items in a series, interrupting elements, independent clauses, dates, addresses, letters, and titles.

Features three instructional modes, including:  
Statement of Rule.

The rules for each skill are broken into smaller, more specific sub-rules, presented with usage examples. The student can see more examples, if needed. Helpful hints are included to show the rule's proper application. In some cases, the student can select the particular concept or rule to be explained.

**Practice Mode.**

Students must determine the right usage (punctuation) or meaning (vocabulary) for specific examples. Students use the results of this activity to decide whether to get help from the teacher, review the rules, or continue the lesson. This mode's final stage is a Mastery Quiz to measure understanding of punctuation marks or vocabulary development.

**Review/Game Mode.** This cumulative review gives students practice and feedback on several rules, stressing speed and accuracy. The score accumulated on this activity determines the amount of time a student may play Alien Raiders, a reward for skill mastery. Each unit has a built-in Management System.

The Management System Menu holds up to 120 student records on the same diskette as the actual skill program. All skills, except for readiness and review drills, can be managed by this system. The Mastery Quiz and Instruction Mode updates the student's record for each skill. Once mastery is achieved, the computer automatically moves the student up to the next skill level. The system is an optional control feature, adaptable to your instructional plans for any software unit.

The Application Mode lets you quickly review and update student record files. Records are divided into as many as five classes; you can add to or delete data from any class, as needed. Reproducible pretests are provided to diagnose student ability levels, and serve as a basis for coding the file. "M" stands for mastery; "P" indicates need for practice, and "I" indicates need for instruction. Reproducible post tests come with each unit to help measure student progress. All units include step-by-step Teacher's Guide to make program use and management simple.

At last there's software that goes beyond drill and practice. New Milton Bradley Educational Software helps students understand how to get the right answer. Easy-to-use programs in Language feature clear, compelling graphics. Students learn the basic skills and move up to mastery. Programs focus on specific learning needs, so students can zero in on the precise areas

where they need work. The student who needs practice on decimal remainders doesn't have to view through long generalities about long division. That's why Milton Bradley Educational Software adapts so easily to your lesson plans.

Every unit contains lesson diskette; Teacher's Guide; and reproducible activity sheets, keyed to each skill, so you can give students even more extra help. Language programs also feature a game that provides a reward for mastery. Your best students will be stimulated. Your underachievers can make steady progress at their own pace. And you'll have more time to do what you do best: teach.

**PRICE: \$44.95**

**TITLE: PUNCTUATION SKILLS: END MARKS, SEMICOLON, COLON NO. 7880**

**PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Program includes period, question mark, exclamation point, semicolon (2 skills), and colon.

Features three instructional modes, including:

Statement of Rule.

The rules for each skill are broken into smaller, more specific sub-rules, presented with usage examples. The student can see more examples, if needed. Helpful hints are included to show the rule's proper application. In some cases, the student can select the particular concept or rule to be explained.

Practice Mode.

Students must determine the right usage (punctuation) or meaning (vocabulary) for specific examples. Students use the results of this activity to decide whether to get help from the teacher, review the rules, or continue the lesson. This mode's final stage is a Mastery Quiz to measure understanding of punctuation marks or vocabulary development.

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**PRICE: \$44.95**

**TITLE: QUESTIONS & STORY**

**PUBLISHERS NAME: IDEATECH CO.**

**DESCRIPTION: LEARNING OBJECTIVES:**

The program promotes reading as a fun activity, encourages creativity and provides practice in categorization.

**PROGRAM DESCRIPTION:**

Questions and Story provides reading practice for all students and motivates the most reluctant readers to participate. Seven questions are presented to the student. The answers are incorporated into one of three randomly chosen stories and presented to the student at one of three reading speeds.

**GRADE LEVEL: 2-6 and remedial**

**PRICE: \$9.95**

**TITLE: READING COMPREHENSION - LEVEL D (READING LEVEL 4)**

**PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**

**DESCRIPTION:** An inductive skill-building program for students at reading levels four through twelve. Developed in conjunction with Instructional/Communications Technology, the program contains a wide range of informative, interesting reading selections and helps to improve twenty-five major comprehension skills through extensive and varied reading experiences.

Each lesson consists of three parts: preparation, preview, and comprehensive reading. During the preparation segment, the student reviews new vocabulary words presented in context sentences. The preview segment, which is optional, provides the student with key sentences from the reading selection. These are presented in an untimed format and give the student a general understanding of what the selection is about. The comprehensive reading segment is a line-by-line presentation of the selection. The rate may be set by the teacher or, if desired, by the student. The rate can also be manually controlled. Each selection is divided segments, with comprehension questions at the end of each segment. Students have the option to reread segments and adjust their reading rate.

**CURRICULUM**

The Comprehension Power package is designed for students at reading levels four through twelve. There are four disks with a total of twelve reading selections at each level. Selection topics include adventure, contemporary issues, sports, career awareness, life adjustments, etc. The following comprehension skills are treated in the questions which accompany each reading selection:

1. LITERAL UNDERSTANDING
  - \* recalling information and details
  - \* following sequence of ideas or events
  - \* identifying speaker
2. INTERPRETATION
  - \* main idea
  - \* making inferences
  - \* predicting outcomes
  - \* drawing conclusions
  - \* interpreting figurative language



- \* visualizing
- \* paraphrasing
- 3. ANALYSIS
  - \* comparing and contrasting
  - \* recognizing cause and effect
  - \* clarifying
  - \* reasoning
  - \* identifying analogies
- 4. EVALUATION
  - \* detecting author's purpose
  - \* understanding persuasion
  - \* recognizing slant and bias
  - \* distinguishing between fact and opinion
  - \* judging validity
  - \* determining relative importance
- 5. APPRECIATION
  - \* interpreting character
  - \* recognizing emotional reactions
  - \* identifying mood and tone
  - \* identifying setting

Each disk in the package contains a manager Program which maintains individual records for up to 100 students. The Manager Program allow teachers to make assignments, set student reading rates, review performance in the twenty-five comprehension skill areas, and generate printed records of student performance.

Comprehension Power lessons are designed so that each lesson can be completed in approximately 20 to 30 minutes. This may be done in one session or two 10 to 15 minute periods. The courseware is highly motivating and success oriented as students usually get a second chance after an incorrect answer. See the reverse side of this sheet for an example of student interaction..

#### FEATURES:

- \* provides extensive and varied reading experiences
- \* improves vocabulary
- \* develops the ability to read more rapidly while reading comprehensively
- \* comprehensive documentation
- \* teacher management program
- \* all data kept confidential

Available levels: LEVEL P, LEVEL E, LEVEL F, LEVEL G, LEVEL H, LEVEL I, COMBINED G/H/I, LEVEL J, LEVEL K, LEVEL L, and COMBINED J/K/L.

PRICE: \$150.00 per level

#### TITLE: READING LEVEL

#### PUBLISHERS NAME: INDIAN HEAD SOFTWARE

DESCRIPTION: Calculates the approximate grade level of reading materials with an error of plus or minus one half a grade level as determined by other methods such as the fog index of the flesch scale. The user simply types in sample passages from the material being evaluated and the computer does the rest. No special knowledge is required to use this program.

PRICE:

#### TITLE: READINGS IN LITERATURE

#### PUBLISHERS NAME: GEORGE EARL

DESCRIPTION: Aid in the study and memorization of 27 famous prose, poem and song selections. For instance, The Gettysburg Address, or Casey At The Bat, or The Bill Of Rights. There is a missing word in every line to guessed letter-by-letter.

PRICE: \$29.95

**TITLE: ROOTS/AFFIXES****PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** Contains lessons on roots, prefixes and suffixes for multiple reading levels (3-8). Emphasis is placed on use of affixes to help decipher word meaning and increase vocabulary.

**PRICE: \$39.95**

**TITLE: SENTENCE DIAGRAMMING****PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Sentence Diagramming (SD) will not only drill in sentence diagramming but will also provide work in parts of speech, types of sentences, and usages of words in sentences. The program can be configured to keep track of each student's progress on the disk for future reference.

**THE PROGRAM**

There are four sections of exercises in SD. All are related, but may be used independently or in sequence, leading up to actually diagramming sentences. I will describe them in the order in which they are presented.

**Parts of Speech.** A sentence is presented and the user must correctly identify the part of speech of each word in the sentence. A question mark appears under the beginning letter of the word to be classified and the user must type the correct 3 letter abbreviation for noun, verb, adverb, etc. Incorrect guesses cost 1/2 point. There is a command to skip over this exercise if desired.

**Usages.** In this exercise, a numbered list of possible uses of words is provided and the user must correctly identify (by number) the usage of each word in the sample sentence. Approximately 5 guesses per word are allowed. The user may skip this section, if desired.

**Type of Sentence.** Here the user must type the first three letters to identify the sentence as declarative, interrogative, imperative or exclamatory. This section may be skipped, as well, if desired.

**Sentence diagramming.** In this exercise the actual sentence diagramming is done. The skeleton is provided and a question mark appears on the diagram. The word that goes there must be identified in the sentence that also appears on the screen above. The word is selected by placing an asterisk under the first letter of the word (by using the right and left arrows) and hitting the space bar. If the correct word was selected, then it appears on the diagram and the question mark moves to another position. After 5 incorrect attempts the correct word will be placed for you.

Provided on the disk are 20 sentences on each of 3 levels of difficulty. The user may start at any level or work up from the easiest to the hardest. Included on the harder level are compound, complex and compound-complex sentences. The easiest levels have simpler sentences, as would be expected.

**USING SENTENCE DIAGRAMMING FOR INSTRUCTION**

SD may be configured by the instructor to keep track of each student's progress (preferably on another disk). It is possible to format SD with respect to drive and slot of program disk and record disk and printer slot. Other formatting options are more directly related to the performance of the students; i.e., what is the required % of the sentences must the student attempt. Also a choice is whether the sentence diagramming section is to be a part of the exercise.

It is possible to read the records stored on the student disk. The teacher may look at all the recorded sessions of a single student or look at every student's latest record. The record

contains the level and average of the student.

#### **DOCUMENTATION**

The program comes with a 5" x 8" booklet with 14 pages of documentation with a table of contents and a 3 page "let's try it out" section. Each section of the program is thoroughly described with all the available options. There is some discussion of the different ways to interpret word usages. The documentation is single spaced and as a result, I think, is difficult to read.

#### **BACKUP COPIES**

The diskette is locked and cannot be copied by normal means, however, a backup diskette can be obtained from Avant-Garde Creations for \$5.

**PRICE: \$19.95**

#### **TITLE: SPEED READER**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Speed Reader is a complete reading development course designed to double and event triple reading speed while increasing comprehension. The program's exercises correct sluggish eye movements and sharpen peripheral vision. Measures of reading speed and quizzes after each lesson provide the user with progress reports on both speed and comprehension.

**PRICE: \$70.00**

#### **TITLE: SPELLING BEE**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** A software learning system for children in kindergarten through third grade, was developed with three objectives in mind:

- \*Build spelling skills and identify basic word groupings (for example, vowels, consonants, three-letter words, etc.)
- \* Link the abstract verbal symbol (word) to the concrete object (picture)
- \* Establish "computer literacy," that is, allow young children to interact comfortably with the computer. Hence, SPELLING BEE's high resolution graphs and musical sound effects capture a child's interest and facilitate comprehension

SPELLING BEE's System Generator allows the parent or teacher to tailor duration and emphasis to an individual child's needs. An easily accessed Demonstration Mode allows the parent to review all spelling words before the child begins. As the child works within the Tutorial, the system ignores incorrect responses and reinforces only correct responses. A Drill Mode then tests the child's performance, recording this information for the parent or teacher.

This package contains documentation addressing parents and teachers, which maps all procedures and explains the system model. EduWare's illustrated Children's Guide introduces youngsters to computer operation.

**PRICE:**

#### **TITLE: SPELLING BEE WITH READING PRIMER**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** A software learning system for children ages three through six, SPELLING BEE with READING PRIMER introduces the learner to spelling and reading.

**PRICE: \$39.95**



**PUBLISHERS NAME: MENTOR SOFTWARE, INC.**

**DESCRIPTION:** Drills pupils on sixty of the most common sight words found in primary readers. Included are words that follow no special spelling rules and are problems for beginning spellers. The programs combine computer display and the spoken word via the cassette tape recorder. The child HEARS the word use in a sentence at the same time the sentence, minus the spelling word, appears on the screen. The student then types in the missing word. Six programs plus a teacher's guide. Elementary

**PRICE: \$59.95**

**TITLE: SPELLING II**

**PUBLISHERS NAME: MENTOR SOFTWARE, INC.**

**DESCRIPTION:** Drills pupils on sixty of the most common sight words found in reading series for primary grades. Among these words are those with irregular spelling for which no special rules apply. The programs combine computer display and the spoken word via the cassette tape recorder. The child HEARS the word used in a sentence at the same time the sentence, minus the spelling word, appears on the screen. The student then types in the missing word. Six programs plus a teacher's guide. Elementary

**PRICE: \$59.95**

**TITLE: STORY TIME AND DON'T FALL**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** STORY TIME - What's your name. Please name someone you like. What are you afraid of? Name a food you don't like. Using the answers to these questions, the computer makes up a delightful story presented with sound and full-color graphics. Over 100,000 variations are possible which incorporate different locales (desert, mountain, seashore, school yard), weather, time of day, and surprise events (find a creepy cave, haunted house, pink flying saucers and much more).

**DON'T FALL** - You can choose words from nine categories (sports, countries, etc.). Every letter you guess that is not in the words brings you one step closer to falling in the water. In the second part of each round you give the computer a word which it must guess, otherwise it falls in. Three skill levels.

**PRICE: \$24.95**

**TITLE: STUDENT WORD STUDY**

**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** This special use disk was designed by teachers to provide a meaningful way for students to practice spelling words and use of new vocabulary.

Given a list of words (spelling or vocabulary) each student creates sentences using the words. A blank is left in each sentence where the word should be.

At a future time, the student can call up his own sentences and fill in the missing word. If the correct word is recalled and spelled correctly, the sentence is cropped from the student's "study list". Students may use their own lists, exchange lists or write challenge lists for each other.

One disk can hold up to 15 sentences for each of 30 students.

**PRICE: \$29.95**



**TITLE: SUPER SPELLER**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Teaches Spelling

Has student practice missed words

Optional work unscrambling---really challenging and fun

Comprehensive scoring

User may input his/her own words is desired

3 word files currently on disk: (1) Grades K-3  
(2) Grades 4-8  
(3) Grades 9-16  
or higher

**PRICE: \$19.95**

**TITLE: SYLLABICATION**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** A series of computer managed activities designed to aid students in developing the skill of syllabication. All the game oriented activities use the same content-data-base which can be changed by the teacher from time to time in order to meet curricular needs.

Designed for a lab setting in which one Apple has two disk units and a printer for progress reports and content management.

**PRICE: \$210.00**

**TITLE: SYLLABICATION TUTORIAL**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** A multiple choice lesson in which students can review rules of syllabication.

**PRICE: \$15.00**

**TITLE: SYLLABLE COUNT**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** A special version of Arithmetic- Tac-Toe -- a tic-tac-toe game with a simulated opponent. In order to get a tic-tac-toe square, a player must correctly count the syllables in a word. Uses words supplied by the teacher.

**PRICE: \$20.00**

**TITLE: TESTING SERIES**

**PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

**DESCRIPTION:** Matching; Multiple choice, True/False, completion. SPELLING & PARTS OF SPEECH QUESTION/ANSWER SERIES

**PRICE: \$32.00**

**TITLE: THE ANSWER FILE**

**PUBLISHERS NAME: EDUCATIONAL SERVICES OF ALASKA**

**DESCRIPTION:** Students of all ages can use the system. Young children can name your pictures or play Word Guess. Older students can answer your questions, or play Word Guess or Flash or do timed touch typing drills. The disk holds up to 80 lessons: make up your own or use pictures, questions, or vocabulary from any book.

To see how simple and foolproof the program is, type "A" for the answer file and then "A" again to use the accompanying somewhat silly picture. Try to name the animals. Now type the word "ENTER" and enter your own names for each of the pictures. If

you are teaching Spanish use Spanish names. If you are teaching Biology use Genus and Species. If you have pre-school children perhaps you might want to enter only the starting letter of each word. When you are finished, give your exercise a name and let someone try it; that's all there is to it! Of course you can use your own pictures or short answer questions or use numbered pictures or questions from any book. Simply enter the student responses you want for each numbered item. You spend only 1 or 2 minutes entering each exercise. But your students can spend hours playing Word Guess, Flash, Answer File, or Timed Typing.  
**PRICE: \$30.00**

**TITLE: THE ENGLISH SAT 1**

**PUBLISHERS NAME: MICRO LAB**

**DESCRIPTION:** Provides aid to students taking the verbal section of the Scholastic Aptitude Test for college entrance. By providing the explanations of all answer choices for the 160 questions, a student learns the reasoning behind each choice; his learning rate increases dramatically with this technique. Included are analogies, antonyms, sentence completions, and English grammar.  
**PRICE: \$30.00**

**TITLE: THE MICRO-EDUCATIONAL TEACHING SYSTEM I**

**PUBLISHERS NAME: MICROMATICS, INC.**

**DESCRIPTION:** These programs differ from the more elaborate voice programs in that they do not use the voice synthesizer and they do not have a historical reporting system. Student exercises are supplied in each program. The exercises are graded by the computer and the results are displayed on the CRT.

- \* Long Vowel - Final F
- \* Vowels and Consonants
- \* Short/Long Vowel Symbols
- \* The Pair That's Always Together - OU
- \* VCV Syllabication
- \* Vowel Sounds in Syllables V/CV (Long Sound)
- \* LF ENDING
- \* VC/CV Syllabication
- \* 'Y' at the end of a word
- \* Vowel sounds in syllables (short sound)
- \* Small word-middle vowel short
- \* R following vowel O
- \* VC/CV and V/CV for 3 & 4 syllable words
- \* Root words ending in S
- \* Contractions #1
- \* Contractions #2
- \* Silent Consonants
- \* Long Vowels - Two together
- \* Soft and hard G
- \* Soft and hard C
- \* Exceptions to syllabication X
- \* Exceptions to syllabication CK
- \* Root words ending in EF
- \* Short and long vowel sounds (2 syllable words)
- \* R following A-E-I-U

**PRICE: \$150.00 three disks**

**TITLE: THE VOCABULARY GAME**

**PUBLISHERS NAME: J & S SOFTWARE**

**DESCRIPTION: FEATURES:**

- \*An exciting, motivating game designed to help students in

- grades 8-12 improve their vocabulary in a fun, competitive way.
  - \* A student has a choice of playing three baseball games: a one-inning game (3 outs), a two-inning game (6 outs), or a three-inning game (9 outs). Students compete against the previous high scorer whose name and score it shown.
  - \* A student has a choice of trying for a single (an easy word), a double, or a triple (a hard word). If the student identifies the correct meaning of the word he observes his player advance to that base. A student always sees the number of outs, runs, and the inning.
  - \* Always displayed is the name of the high scorer for each game. Whenever he or she chooses, the teacher can use a password to eliminate these scores and start from the beginning.
  - \* Words are chosen from a bank of almost 1000 S.A.T. type words. No words are repeated in the same game.
- PRICE: \$24.95**

**TITLE: TRUE OR FALSE SYLLABICATIONS**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** A true/false activity in which students try to reach the top of a scale by correctly judging given syllabications. This activity uses words and syllabications supplied by the teacher.

**PRICE: \$20.00**

**TITLE: U-SPELL**

**PUBLISHERS NAME: MENTOR SOFTWARE, INC.**

**DESCRIPTION:** Allows the teacher to create an audio enhanced spelling drill. The desired spelling word and sentence are entered into a computer program. The sentence is also orally recorded on the tape recorder. When using the program, the child HEARS the word used in a sentence and then SEES the sentence, minus the spelling word, on the screen. The missing word can then be entered. Two lesson preparation programs plus blank tapes.

**PRICE: \$34.95**

**TITLE: VERB USAGE 1 & 2**

**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** These programs were written in response to many requests from teachers whose students needed simple, repetitive work on verbs.

Each disk contains 20 lessons and 4 tests on verb usage. Each lesson requires the student to discriminate between the present, past and past participle form of commonly used and misused verbs. These programs give students who have difficulty with correct verb usage the added practice they need. (The lessons on VERB USAGE 1 and 2 give more indepth practice at an elementary level than 12-08 VERBS.)

Sentences that are missed are presented to the student at a later time.

**REGULAR FEATURES**

- \* upper/lower case letters
- \* create
- \* student planning
- \* modify
- \* delete

**SPECIAL FEATURES**

- \* Student safeguards - 10 successive correct responses or less than 41% (discounting the 1st four frames) terminates the presentation.

PRICE: 12-09 Nouns/Pronouns.....\$32.95  
 12-05 Roots/Affixes.....\$39.95  
 12-06 Homonyms.....\$39.95  
 12-07 Antonyms/Synonyms.....\$39.95  
 12-08 Verbs.....\$32.95  
 12-12 Verb Usage 1 and 2.....\$49.95  
 (2 disks)

**TITLE: VERBS I**

**PUBLISHERS NAME: CONVERGENT SYSTEMS, INC.**

**DESCRIPTION: WHAT IS A VERB? (1)**  
 Identify verbs in statements and questions. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 14 practice items. Interaction limited to typing one character to answer practice questions.

**WHAT IS VERB TENSE? (2)**  
 Classify verbs in the past, present and future tenses. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 14 practice items. Interaction limited to typing one character to answer practice questions.

**WHAT IS AN AUXILIARY VERB? (3)**  
 Identify verb phrases and determine which elements are auxiliary verbs. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 15 practice items. Interaction limited to typing one character to answer practice questions.

**"BEING" VERBS (4)**  
 Identify forms of to be in the present, past and future tense; classify "being" verbs as main or auxiliary verbs. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 13 practice items. Interaction limited to typing one character to answer practice questions.

**ACTION AND LINKING VERBS (5)**  
 Classify words as action or linking verbs. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 17 practice items. Interaction limited to typing one character to answer practice questions.

**PRICE: \$60.00**

**TITLE: VERBS II**

**PUBLISHERS NAME: CONVERGENT SYSTEMS, INC.**

**DESCRIPTION: IRREGULAR VERBS, PART 1 (6)**  
 Use irregular d- and t- ending verbs in the past tense. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 16 practice items.

**IRREGULAR VERBS, PART 2 (7)**  
 Uses irregular verbs that change vowel sounds to form their past tense forms and/or take an n to form their past participles. Combination tutorial and practice/drill, reinforcement feedback, forced correct response; 15 practice items.

**PRICE: \$45.00**

**TITLE: VERBS III**

**PUBLISHERS NAME: CONVERGENT SYSTEMS, INC.**

**DESCRIPTION: IRREGULAR VERBS, PART 3 (8)**  
 Uses the past and past participle forms of irregular verbs. Review lesson, practice/drill. Main review device is a paragraph whose verbs the student must change to the right tense by typing the correct form in; 15 practice items.

**THE TIME MACHINE (VERBS REVIEW) (9)**  
 Uses regular and irregular verbs in the past, present and future



tenses. Student chooses one of 25 given dates at a time and is shown a brief description of an event in American history. The practice sentence is related to the event; student types correct answer in; 25 practice items.  
**PRICE: \$20.00**

**TITLE: VOCAB**

**PUBLISHERS NAME: MERRY REE COMMUNICATIONS**

**DESCRIPTION:** Conceptual and developmental vocabulary study - ages 6+. Developed by experts in education and instructional design.  
**PRICE: \$29.95**

**TITLE: VOCABULARY QUIZ**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** A word meaning game worth more than \$1,000 (play bucks). A player selects the meaning of ten words (worth from ten to one hundred play bucks each). There's no need to agonize over mistakes; the computer makes corrections immediately. The vocabulary comes from a list of twenty teacher selected words. The system also collects student results and makes reports to the teacher.

**PRICE: \$25.00**

**TITLE: VOCABULARY SKILLS: PREFIXES, SUFFIXES, ROOT WORDS No. 7882**

**PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Program includes introductory concepts, prefix tutor, suffix tutor (easy), suffix tutor (hard), root word tutor, and word building.

Features three instructional modes, including:  
Statement of Rule.

The rules for each skill are broken into smaller, more specific sub-rules, presented with usage examples. The student can see more examples, if needed. Helpful hints are included to show the rule's proper application. In some cases, the student can select the particular concept or rule to be explained.

Practice Mode.

Students must determine the right usage (punctuation) or meaning (vocabulary) for specific examples. Students use the results of this activity to decide whether to get help from the teacher, review the rules, or continue the lesson. This mode's final stage is a Mastery Quiz to measure understanding of punctuation marks or vocabulary development.

Review/Game Mode. This cumulative review gives students practice and feedback on several rules, stressing speed and accuracy. The score accumulated on this activity determines the amount of time a student may play Alien Raiders, a reward for skill mastery. Each unit has a built-in Management System.

The Management System Menu holds up to 120 student records on the same diskette as the actual skill program. All skills, except for readiness and review drills, can be managed by this system. The Mastery Quiz and Instruction Mode updates the student's record for each skill. Once mastery is achieved, the computer automatically moves the student up to the next skill level. The system is an optional control feature, adaptable to your instructional plans for any software unit.

The Application Mode lets you quickly review and update student record files. Records are divided into as many as five classes; you can add to or delete data from any class, as needed. Reproducible pretests are provided to diagnose student ability levels, and serve as a basis for coding the file. "M" stands for

mastery; "P" indicates need for practice, and "I" indicates need for instruction. Reproducible post tests come with each unit to help measure student progress. All units include step-by-step Teacher's Guide to make program use and management simple. At last there's software that goes beyond drill and practice. New Milton Bradley Educational Software helps students understand how to get the right answer. Easy-to-use programs in Language feature clear, compelling graphics. Students learn the basic skills and move up to mastery. Programs focus on specific learning needs, so students can zero in on the precise areas where they need work. The student who needs practice on decimal remainders doesn't have to view through long generalities about long division. That's why Milton Bradley Educational Software adapts so easily to your lesson plans.

Every unit contains lesson diskette; Teacher's Guide; and reproducible activity sheets, keyed to each skill, so you can give students even more extra help. Language programs also feature a game that provides a reward for mastery. Your best students will be stimulated. Your underachievers can make steady progress at their own pace. And you'll have more time to do what you do best: teach.

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**PRICE: \$44.95**

**TITLE: VOCABULARY SKILLS: CONTEXT CLUES NO. 7881**

**PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Program includes development of vocabulary through context, definition, contrast, educated guesses, and example.

Features three instructional modes, including:

Statement of Rule.

The rules for each skill are broken into smaller, more specific sub-rules, presented with usage examples. The student can see more examples, if needed. Helpful hints are included to show the rule's proper application. In some cases, the student can select the particular concept or rule to be explained.

Practice Mode.

Students must determine the right usage (punctuation) or meaning (vocabulary) for specific examples. Students use the results of this activity to decide whether to get help from the teacher, review the rules, or continue the lesson. This mode's final stage is a Mastery Quiz to measure understanding of punctuation marks or vocabulary development.

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**PRICE: \$44.95**

**TITLE: VOWEL EXERCISE**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** Practice saying vowel sounds. A teacher and student exercise in which the program acts as a random syllable presenter and secretly keeps track of how well the student is doing.

**PRICE: \$15.00**

**TITLE: WORD ANALOGY**

**PUBLISHERS NAME: SEI**

**DESCRIPTION:** Over 1200 word relationships are saved in the data base with many questions coming directly from sample aptitude tests. After attempting to answer each problem, the student has the option of viewing a hint.

**PRICE: \$25.00**

**TITLE: WORD BREAK UP**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** An exercise in which students divide words into their syllables winning fifty play bucks per correct word. This activity uses words and syllabifications supplied by the teacher.

**PRICE: \$25.00**

**TITLE: WORD GAMES**

**PUBLISHERS NAME: MERRY BEE COMMUNICATIONS**

**DESCRIPTION:** Vocabulary development - ages 8+. Developed by experts in education and instructional design.

**PRICE: \$24.95**

**TITLE: WORD PREP (BASIC) - VOCABULARY DRILL**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** The program disk for WORD PREP (Basic) includes:

(1) 500 vocabulary expanding words and associated definitions, appropriate for use by students at the upper elementary, middle school and junior high levels

(2) Randomization routines which ensure a novel selection of words and purported definitions, each time the program is used

(3) Facilities enabling you to modify the word list, to better fit your own set of preferred words or definitions

(4) Instructions and facilities enabling you to create your own set of word lists...one, two, or however many you want...of up to 1000 words (and definitions) each

What does all this add up to? A program ready for immediate use...as well as one you can adapt to your own specific needs...without programmer intervention!

The program offers a measure of security against any unauthorized alteration of word lists, by first requiring entry of a "password". The password consists of the four letters word, each letter to be depressed simultaneously with depression of the CTRL key, (and then finally pressing the return key).

**PRICE:**



**TITLE: WORD PREP-ADVANCED****PUBLISHERS NAME: MICRO POWER & LIGHT CO.****DESCRIPTION:** Vocabulary drill; expandable with your own word list; 1000 words. Young adults; SAT. and GRE. preparation.**PRICE: \$29.95****TITLE: WORD RECOGNITION BUILDER****PUBLISHERS NAME: NAROM INDUSTRIES****DESCRIPTION:** This program presents vowel sounds, consonant blends, compound words and affixes in challenging exercises. Student is stimulated to respond quickly and to increase accuracy through state-of-the-art electronic reinforcement techniques.**PRICE: \$299.50****TITLE: WORD SKILLS 1: PREFIXES****PUBLISHERS NAME: PROGRAM DESIGN, INC.****DESCRIPTION:** Lively instruction in some common prefixes to help improve vocabulary, reading and spelling skills. Students learn the meanings of a group of prefixes, practice putting the correct prefix before words, and also deduce the meaning of new words by analyzing the prefix and root. 5 programs.**PRICE: Disk or Tape, \$14.95****TITLE: WORD STRUCTURE****PUBLISHERS NAME: BORG-WARNER EDUCATIONAL SYSTEMS****DESCRIPTION:** The MicroSystem80 Word Structure series helps students communicate more effectively in both written and oral discourse by providing individualized instruction in basic word analysis.

Each lesson in Word Structure provides instruction in one or more specific language skills. The contents of the program are structured according to increasing levels of difficulty. As a result of this spiral approach, material presented in later lessons in the series may include information from an earlier lesson series. The program introduces new material which builds upon previously acquired information.

Each level of Word Structure begins with a pretest to determine a student's proper placement within a lesson series and concludes with a post-test to assess mastery. Student records are maintained for review in the management system and may be permanently recorded with the use of an optional printer.

The first four disks in Word Structure, Lesson Series A-D, are intended for developmental use in the middle grades while the final four, Lesson Series F-H, are intended to be used developmentally by junior high students.

The Word Structure series also may be used on a remedial basis with older students who need supplemental instruction in basic language skills or for enrichment by gifted students. The variety of materials covered by this individualized, self-paced series will be motivational for elementary through adult students who require instruction in language skills.

The concepts in the Word Structure series are developed through the spiral approach. New skills are introduced while knowledge acquired from previous learning is strengthened. Regarding degrees of comparison, the student has been introduced previously

to

- the concept of comparing
- the use of -er and -est
- the concepts of positive, comparative, and superlative
- the use of more/most and less/least with some adjectives to form comparisons.

The student must continually use this knowledge to complete the activity successfully.

**Contents:**

- Disk A - Capitalization/Abbreviation
- Disk B - Spelling/Syllables; Singulars/Plurals
- Disk C - Possessives; Positives/Comparatives/Superlatives
- Disk D - Prefixes; Suffixes
- Disk E - Capitalization/Abbreviation
- Disk F - Spelling/Syllables; Singulars/Plurals
- Disk G - Possessives; Positives/Comparatives/Superlatives
- Disk H - Prefixes/Suffixes

All come with management system and Teacher's Guide.

**PRICE: A-H includes 8 disks \$600.00**  
**A-D includes 4 disks \$300.00**  
**E-H includes 4 disks \$300.00**

**TITLE: WORD-A-TACH**

**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** Words are presented tachistoscopically to the student. Four different time durations for the stimulus may be selected by the teacher.

The teacher may assign common sight words which are already on the lessons or enter his/her own word lists. The student says the word into a tape recorder for later review by the teacher. This is a simple way for a student to practice vocabulary recognition.

The teacher can MODIFY existing word lists or CREATE new word lists. There is no student recordkeeping as the student's only response is an oral response into the tape recorder.

**PRICE: \$26.95**

**TITLE: WORDSKILL FOR THE MICROCOMPUTER - GRADES 7-ADULT**

**PUBLISHERS NAME: SCIENCE RESEARCH ASSOCIATES, INC.**

**DESCRIPTION:** Four intriguing games motivate students to sharpen language arts skills while they compete against the computer or against a classmate. Games emphasize 4 main concepts-

- \* synonyms
- \* definitions
- \* antonyms
- \* analogies

All 4 games are based on lists of target words from SRA's Wordskill series. Available in levels 1-6, corresponding to wordlists for reading grade levels 7-12.

Ideal for junior or senior high school language arts classrooms...learning labs...resource centers...adult education and ESL classrooms...any setting where language arts skills are taught. Wordskill for the Microcomputer is a motivating supplement to SRA's Wordskill series and an effective vocabulary builder when used independently. No prior knowledge of computers is needed.

A menu lets students select the game they want to play. The games are "Name That Word" (analogies), "RevealIt" (synonyms), "KnowIt" (definitions), and "WordMaze" (antonyms).

Students select 1-player or 2-player format. In 1-player format, student competes against time and the computer. In 2-player format, individuals or teams of 2 compete against each other. NAME THAT WORD: Players sharpen their skills in recognizing analogies between words. Gives excellent practice in reasoning abilities as well as in vocabulary skills.

REVEALIT: When Players select an underlined number, the computer display a word. Players then search for a synonym by choosing numbers without underlines. Demands memory, strategy, and word knowledge.

KNOWIT: Computer displays a definition of an unnamed word. Players must locate the word (in their lists) and type it into the computer. The same word may be defined in multiple meanings and as various parts of speech.

WORDMAZE: To move a marker toward goal G, players type in an antonym for the word displayed on the screen. Each correct response permits a player to make one move up, down, or to the left or right.

Components: The compete program for each level contains 2 diskettes, the Wordskill text for the level selected, and Instructor's Manual, 50 sets of Student Record Sheets, and 50 sets of Wordlists.

**PRICE: \$150.00**

**TITLE: WORDY**

**PUBLISHERS NAME: COM PRESS**

DESCRIPTION: WORDY is a three diskette package which contains writing assistance lessons with imaginative graphics. The do's and don'ts of composition are taught through examples and quizzes. Topics covered are circumlocation, vague expressions, redundancy, "it is" constructions, weakening intensifies, pretentious diction, elaborate constructions and unnecessary "is" and "are" forms.

**PRICE:**

## FOREIGN LANGUAGES

**TITLE: ALICIA- A BILINGUAL READER**

**PUBLISHERS NAME: GEORGE FARL**

**DESCRIPTION:** Study a Spanish translation of "Alice in Wonderland". Uses a word-by-word test method along with the special Hi-Res screen alphabet.

**PRICE: \$29.95**

**TITLE: ASTRO WORD SEARCH: FRENCH**

**PUBLISHERS NAME: PROGRAM DESIGN, INC.**

**HARDWARE REQUIREMENTS:** Voiced cassette recorder- not attached to computer

**DESCRIPTION:** High school to adult

Like Astro Search: Spanish, except this time it's French vocabulary words.

**PRICE: \$23.95**

**TITLE: CHINESE LESSONS**

**PUBLISHERS NAME: COMPUTER TRANSLATION, INC.**

**DESCRIPTION:** Chinese Lessons are simplified and enjoyable with the Apple II computer. Chinese greetings, times, seasons, numbers, foods, and other commonly used terms (200 in all) are contained in eleven easy-to-use lesson. Color, graphics, and sound are used in each lesson in exciting combinations. The proper stroke sequence for each character is clearly shown and can be repeated stroke by stroke at the user's pace. Exercises with exam scoring are part of each lesson. Menus used throughout the lessons make it easy to select what is just right for you.

**PRICE: \$29.95**

**TITLE: FOREIGN LANGUAGE VOCABULARY DRILL**

**PUBLISHERS NAME: COMPU-TATIONS**

**DESCRIPTION:** A drill and practice vocabulary program for learning a foreign language. Available in German, Spanish or French.

**PRICE: \$24.95**

**TITLE: FOREIGN/ENGLISH**

**PUBLISHERS NAME: SEI**

**DESCRIPTION:** Contains over 900 American vocabulary words that come directly from foreign languages. Each multiple choice question is accompanied by the correct definition, the pronunciation, the originating language and a literal translation, if applicable. Special characters are used in generating the foreign words and the pronunciations.

**Sample:**

**Foreign Word:** creme de la creme

**Definition:** choicest part

**Pronunciation:** kram da la krem

**Language:** French (cream of the cream)

**PRICE: \$30.00**

**TITLE: GERMAN VOCABULARY DRILL**

**PUBLISHERS NAME: COMPU-TATIONS**

**DESCRIPTION:** A drill and practice program for German to English translation and vice-versa. The program includes several practice files and allows the teacher, parent or student to develop additional specific files. A score summary is presented at the end of this program, which was written by a foreign



language teacher. Vocabulary drills in other languages are being developed.

**PRICE: \$24.95**

**TITLE: HEBREW II**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** A useful tool for education and everyday communication such as memos and notices. You write out and edit, either on the spot or later, a page at a time of Hebrew text. You can also use it to label graphs, maps, and pictures on the Apple II screen and then print them. The finished text or picture may be saved to disk and/or printed on the Apple Silentyper or any graphics-capable printer. Includes vowels. Perfect for teaching students Hebrew spelling and typing. Printed pages can be submitted to the teacher and the page can later be edited on the screen to show the recommended corrections.

**PRICE: \$60.00**

**TITLE: HEBREW II PLUS**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** A mini word processor which mixes Hebrew and English on the same screen; Hebrew prints right-to-left on the screen, with vowels; IBM keyboard layout; can label graphs and pictures; prints on any printer with graphics.

**PRICE: \$90.00**

**TITLE: LANGUAGE SKILLS**

**PUBLISHERS NAME: SILWA ENTERPRISES**

**DESCRIPTION:** Over 800 entries each with choice of English/Foreign or Foreign/English.

**PRICE: \$29.95**

**TITLE: MALUM II...IMPERIAL ROMAN PROGRAMMABLE COMPUTER**

**PUBLISHERS NAME: COMPUTING CONCEPTS**

**DESCRIPTION:** This program is a Latin language based interpreter similar to BASIC. It takes the Latin language equivalent of BASIC commands. Of course, all numeric input, output and arithmetic is via Roman numerals. Two sample programs come with the disk. Mallum II allows the user to write and store programs on the supplied disk, or other disks and tapes. One disk and eleven page documentation manual.

**PRICE: \$19.95**

**TITLE: MICRO-DEUTSCH**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION:** Includes 24 grammar lessons, covering all material of an introductory German course. Four test units also included. Grammar lessons use substitution transformation drills, item ordering, translations and verb drills. Drill vocabulary based on use frequency lists. Suitable for use with any high school or college text book.

**PRICE: \$179.00**

**TITLE: THE LINGUIST**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** THE LINGUISTIC, THE MOST EXCITING PIECE OF EDUCATIONAL SOFTWARE RELEASED THIS YEAR IS A TOTALLY UNIQUE

CONCEPT FOR THE APPLE. Now you can get the help you need learning spelling, pronunciation, or definitions of words or phrases in English, Hebrew, Russian, Hiragana, Katakana, Greek, or any other language that uses these alphabets. For technical reference, learning a new language, or brushing up on old skills, The Linguist is ideal for leisure use, students, schools, businesses, and professionals. For reference, study, or drill, The Linguist is there when you need it.

THE LINGUIST'S FEATURES INCLUDE:

- \* Allows the Apple to correctly print foreign alphabets or phonetic symbols as required on the high resolution graphics screen. Includes the special characters required by Germanic, Scandinavian, and romances languages.
- \* Works with words, phrases, definitions, technical terms, or phonetic pronunciation.
- \* Operates with one or two languages you select to set up files of equivalent words. Enter a word in either language and its definition or translation will be displayed instantly.
- \* Can change languages at any time.
- \* Drills on words specified from your word files. The program gives hints, keeps score, and corrects mistakes.
- \* Stores a maximum of 44000 words and their equivalents, 2600 definitions, or 20000 foreign phrases and their equivalents per 16 sector format disk. Multiple data disks may be utilized.

PRICE: \$40.00

TITLE: VOCABULARY PROMPTER

PUBLISHERS NAME: JAGDSTAFFEL SOFTWARE

DESCRIPTION: A programmed learning software utility package for use by the language arts student and/or instructor with access to an Apple TM computer having one disk drive under DOS 3.3 and floating point basic.

Vocabulary prompter does not require a knowledge of software programming.

Some of the many uses are listed here:

Language to language word learning

Language to language phrases

Conjugation of verbs

Definitions and terms

Nomenclature and terms

Sentence completion

Multiple choice questions

Arithmetic tables

Allows the user to create data file/lists and to study them under programmed learning techniques.

In the study option, an incorrect response will prompt the correct response and allow the user to enter the correct response.

Data file/lists are presented by randomizing the sequence of the paired prompt/responses. All pairs of prompt/responses are presented.

The user, when creating a data file/list has the ability to flag sentences and questions having a single word, letter or number for a response, to always prompt first in any study or test option.

Data file/lists can have from one (1) to fifty (50) pairs of prompt/response units.

Under the study and random test options, vocabulary prompter will tumble the data file/list and present the prompt/response in random sequence. The user has the option have (A) prompt with (B) response, or (B) to prompt with (A) response.

Under random II option, vocabulary prompter will present on a

random basis either (A) or (B) prompt with the opposite response. The user has the option to change or add to the data file/list. All study and test options are scored with a percentage of correct to incorrect responses.

**PRICE: Vocabulary Prompter \$29.95**

<b>German/English</b>	<b>12.95</b>
<b>Spanish/English</b>	<b>12.95</b>
<b>French/English</b>	<b>12.95</b>
<b>Russian/English</b>	<b>12.95</b>
<b>Japanese/English</b>	<b>12.95</b>

## GRAPHICS

### TITLE: VIDEO LOOM II

#### PUBLISHERS NAME: LAUREL SOFTWARE

DESCRIPTION: With VIDEO LOOM II and an Apple II+ personal computer, a weaver can simulate a handloom design and see a high resolution color picture of the resultant textile in seconds. The program is easy to use. No computer experience is required. The computer, via a TV screen, asks the weaver for information about how the "loom" is to be set up, what colors are to be used, yarn sized, treadling order, etc. The weaver responds by typing answers on an ordinary typewriter keyboard.

Once the loom is "warped" and the weaving sequence established, the computer draws a full color television picture of the design. The designs can be saved on a small, inexpensive (and reusable) magnetic diskettes. Of course, the design images can easily be photographed if color slides or polaroid pictures are desired.

The original "VIDEO LOOM" program, released in early 1979, was enthusiastically received by weavers, designers and educators. It was the subject of a special exhibit and the 1979 Conference of Northern California Handweavers' Guilds. At the Lawrence Hall of Science, in Berkeley, California, it was used to introduce teachers, textile hobbyists and designers to the principles of computer aided design. For more than three years it has been enabling weavers to preview their designs before going through the time consuming process of warping and creating samples.

The new version features fast machine language routines for weaving and drawing, and a fool-proof screen editor for setting up the loom. This means that weaving is 20 to 30 times faster than with the original program and that designs can be changed more easily than ever.

VIDEO LOOM II simulates a 32 harness loom with 64 treadles. The loom can be displayed in up to six colors (including black and white).

In addition to choosing a threading draft, tieup and treadling, the program allows the weaver to vary warp and weft colors, thicknesses and the spacing between threads. This makes it possible to create design images that look very much like photographs of woven textiles. Alternatively, by using very thick threads and wide spaces, a "magnified" view of a textile can be created. This feature can be used by teachers to realistically display and compare the structures of different kinds of weaves.

The program has a mode that permits the weaver to use the computer's keyboard keys as treadles. In this way, a design can be developed one weft at a time, just as if a real loom were being used. The weaver also has the option of entering an entire treadling at once, and, in a matter of seconds, the computer will draw as many repeats as necessary to fill the TV screen. After viewing the design, the weaver can quickly and easily modify it, and again, in only a few seconds, see the effect of any changes.

During a weaving session, all, or only some, of the design elements can be saved on reusable, magnetic diskettes. Any design element that has been saved can be recalled at any time. This permits, for example, the tieup or treadling from one pattern to be combined with threading draft from another, without typing in any new data.

Hardcopy printout of the draft, tieup, treadling and all other design elements are available. If the computer is equipped with the proper accessories, a graphics printout of the design images can be obtained at the touch of a key.

PRICE: \$59.95+ \$4 for postage and handling.



**TITLE: APPILOT II FDU-DISK**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** The proven Apple II PILOT Package has been expanded to include both high and low resolution graphics, a built in student timer, and voice Symtec light pen input, mixed hi res graphics and text, and voice output using the Muse Voice program. Easily create multiple copies of lessons for student use. Includes a comprehensive user's guide and interactive lessons to teach Appilot programming.

**PRICE: \$99.95**

**TITLE: E-Z-GRAF**

**PUBLISHERS NAME: UNIDATA, INC.**

**DESCRIPTION:** This is a general interactive graphing program using DOS on an APPLE II. It uses the Cartesian coordinate system and accepts any numerical data in the X, Y form whether positive, negative, integer, or real. Each set of data can be stored, along with labels, in a text file on the disk for further reference. Features include text editing, graph size and variable tick marks.

**PRICE: \$24.95**

**TITLE: TURTLE**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Use this package to teach the Turtlegraphics commands (Move, Turn, Fillscreen, etc.) in a convenient and motivating way. The turtle remains visible on the screen while the student types in the commands. Turtle commands are directly compatible with Apple Pascal Turtlegraphics.

**PRICE: \$29.95**

## LIBRARY SCIENCE

### **TITLE: LEARNING ABOUT CATALOG CARDS**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** An actual catalog card is reproduced on the screen. The student is asked specific questions about the information on the card and types in his/her answers. An outstanding feature of this program is that if the student gives an incorrect answer, the computer not only tells the student the correct answer but, in reverse color, actually shows the student the exact location on the card where that information can be found.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

### **TITLE: LEARNING TO LOCATE BOOKS ON THE SHELF**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** This program explains the different ways in which books are shelved in libraries. Fiction and non-fiction markings on the spines are explained as well as how to find those books on the shelves.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

### **TITLE: LEARNING TO UNDERSTAND THE CARD CATALOG**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** This program explains the 3 ways to look up a book in the card catalog. After providing all the basic information, the student is asked a series of questions about various books and is required to type on the correct answers, indicating he/she knows which drawer to consult, depending on the information available.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

### **TITLE: LEARNING TO UNDERSTAND THE TITLE PAGE**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** An actual Title Page is reproduced on the screen. The student is asked questions pertaining to that Title Page. For each correct answer the student "earns" a portion of the picture. When the student answers all the questions correctly, the completed picture appears on the screen with appropriate comments on the student's success on completing the picture.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

### **TITLE: LEARNING TO USE AN INDEX**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** A sample index is shown on the screen. The student is asked a series of questions and types in the correct answers. At the outset of the program the student is told he/she is "lost in the woods". Every correct answer brings a clue to help the student home safely.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

### **TITLE: LEARNING TO USE THE TABLE OF CONTENTS**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** An actual Table of Contents is reproduced on the screen. The student is asked questions pertaining to that Table

of Contents. For each correct answer, the student can take a turn in the "maze". If the student has all the answers right (and makes all the right turns), he/she completes the maze and gets "home" safely.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: LIBRARY SKILLS**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:**

Coverage: What's there...

- (1) The kinds of reading materials
- (2) The kinds of files

How to find it!

- (1) Fiction, nonfiction, and biographies
- (2) Using the Dewey decimal system
- (3) Using the card catalog
- (4) Using reference materials

**Required:** Fourth grade reading comprehension skills

**Format:** Following the tutorial presenting each new topic, the student has an opportunity to do a number of relevant exercises, intended to reinforce his or her understanding of the material just covered.

Throughout, the student helps 'Allie Gator' select the right kind of reference material, and then further helps Allie find it!

A concluding master quiz offers the student a chance to do away with Allie - provided the student can demonstrate his or her ability to now use the library without help!

**PRICE:**

**TITLE: OVERDUE BOOKS PROGRAM**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** This program, created (out of desperation) by an elementary school librarian, is a winner. The circulation information is typed into the computer (book, student, teacher) and can be recalled in a variety of ways. It can be called up by typing in the name of the "student" and the computer will list all books signed out in that student's name. It can be called back by "teacher" so that if that teacher's class is in the library, a complete list of books out, in that class, is immediately available. It can be called out by "all", which will list all books outstanding, in alphabetical order, by teacher. Another outstanding feature of this program is that it can be recalled on the screen or on the printer. By recalling it on the printer, the librarian has a complete, up to date list of all outstanding books. Also, that list can be reprinted so that each teacher has a copy, with absolutely no additional time or work required by the librarian. When a book is returned it takes but a second or two to delete that information from the data, keeping the list up to date at all times.

**PRICE: \$25.00**

**TITLE: THE LIBRARIAN (VERSION 2)**

**PUBLISHERS NAME: PROFESSIONAL COMPUTER SYSTEMS**

**DESCRIPTION:** The Librarian allows you to store Bibliographic Abstracts of Magazine Articles, Chapters of Books, Songs, Videotape Recordings, Computer Programs, Recipes, or any other indexable item where an Abstract is desirable. Up to 500 items

may be stored per disk and you may continue storing on other disks.

When entering items into the data base, you may specify up to 8 Retrieval Categories and an Abstract of up to 252 characters. When searching a disk, you may specify up to 8 required and 8 optional categories, and may search for required and optional keywords in the Abstract and other fields of each record.

You may do any of the following with The Librarian:

- \* Set Up Individual Disks to Handle Specific Items.
- \* Easily Change Printer Specifications.
- \* Search for Specific Categories of Keywords in Any Field.
- \* List All Items.
- \* List All Retrieval Categories with Associated Items.
- \* List Major Headings with Categories and Items Grouped Within.
- \* Sort Major Headings, Retrieval Categories, and Any Field of Each Item (Except Abstracts).
- \* Perform File Maintenance of Any Sequential or Random File that is Included in the System.

**PRICE: \$29.95 Plus \$2.00 for Postage & Handling (Entire order)**  
**\$19.95 (in quantity of 3 or more)**



## MATHEMATICS

### **TITLE: A COMPUTER LABORATORY MANUAL FOR NUMBER THEORY**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** Teach number theory as an experimental science, and encourage your students to discover important facts about number theory by means of experiment and inference or induction.

The advantages of such an approach are manifold. The students gain experience at solving problems in mathematics, and learn techniques of approaching problems which should be useful to them in other branches of mathematics. They see the interplay between intuition, experiment, and logical proof. They learn material of a rather concrete nature which will be useful later in their study of abstract algebra.

Through computer experimentation, the undergraduate student is enabled to experience research, or at least something very close to it. The student gathers data and studies a problem on his own, and makes decisions as to what to do next. He makes guesses and tries to observe patterns. The first programming assignments are designed so that they can be done by beginning programmers, however, the manual is not designed to teach BASIC or any other language.

The instructor's manual contains forty-one experiments, an explanation of each experiment, including a program to do the experiment, and a run of the program. Extensive supplementary notes are included for each chapter in the student manual.

**PRICE: \$95.00**

### **TITLE: ADDITION AND SUBTRACTION**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Second graders

Children are introduced to the basic concepts of adding things together. Then, examples are introduced. Simple examples with student typing in correct answers (and computer correcting errors), as well as offering motivation for correct answers.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

### **TITLE: ALGEBRA DRILL AND PRACTICE**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** With the current national emphasis on basic mathematical skills and the perennial money crunch, this package will enable schools to provide drill, practice and help for students of algebra with little direct instructor involvement. Once the student knows how to manage the technical details of the program, such as how to answer the computer or how to get started at the terminal, the programs provide all the guidance necessary. For maximum effectiveness, the student should be taking a course in algebra and the use of the package should be keyed to the pace of the course.

While these programs are clearly not a substitute for the teaching/tutorial role of the instructor, they do provide the student with virtually unlimited numbers of sample problems and their detailed, step-by-step solutions. If the student is working with problems at a suitable level of difficulty, one or more of the randomly generated examples (during the computer session) should call to mind recently learned techniques, and the drill and practice should reinforce those techniques.

In some of the drills, the student may select a level of difficulty that provides hints. In this case the student is stepped through the exercises in a manner following the worked-out examples. At this level of difficulty, each of the student's

intermediate answers on the way to the solution is checked and the correct answer is supplied by the program as necessary. For most students, one of the available levels offered by the programs should provide appropriate drill. The programs are not intended to teach basic concepts, however, and other than the correction of intermediate results and hints provided in response to some partially correct answers, they do not attempt to diagnose a student's particular difficulties. In some cases, therefore, back-up assistance from the instructor or a teaching assistant may be necessary.

The problems start at an easy level and work up to sufficiently challenging ones for the college-level remedial student. The package consists of nine self-contained CAI programs in BASIC for drill and practice on elementary algebraic skills; these units are described below.

ALCOMY provides drill and practice with addition, subtraction, multiplication, division, and reduction of algebraic fractions.

FRACTS provides drill and practice with addition, subtraction, multiplication, division and reduction of numeric fractions.

SIMPLE provides drill and practice with simplifying algebraic expressions, including addition, subtraction, and use of the distributive property.

LINES provides drill and practice with finding slopes and equations of lines.

SIGNS provides drill and practice with signed numbers and with order of arithmetic.

PERCENT provides drill and practice with percents.

The above six drills interact with the student in the following way: a sample problem with its solution worked out in detail is presented; the student is then given a block of problems with similar structure to solve. When a problem is missed twice, the student may elect to see the complete solution or proceed to another problem. After several mistakes, if the student refuses the chance to see the solution to the problem missed, he is presented with another sample problem and solution.

The last three drills dealing with solving word problems offer the student the choice of level of difficulty. At level 1 the student needs only arithmetic skills and no knowledge of algebraic techniques. Level 2 involves setting up expressions which contain variables for each of the quantities in a problem; for level 2 the student should have been introduced to the use of variables and expressions to represent quantities. Level 3 presents complete word problems and guides the student to the solution; for this level the student should be able to use variables to represent quantities and to solve linear equations. Level 4 also presents complete word problems, but offers no hints; the skills required are the same as for level 3.

PRICE: \$125.00

#### **TITLE: ALIEN ADDITION**

#### **PUBLISHERS NAME: DEVELOPMENTAL LEARNING MATERIALS**

**DESCRIPTION:** Alien Addition provides practice in addition of numbers 0 through 9 in an "alien invasion" theme. Invading spaceships with addition problems move down from the top of the screen toward a laser cannon on a platform at the bottom. Answers are placed in the cannon to "equalize" the invader with the correct answer. If a spaceship reaches the cannon range before the right answer, the cannon is exploded in an "atomic" cloud. Hits and misses are recorded on the terrain at the bottom of the screen.

**PRICE: Complete package: \$39.00**

**Diskette only: \$36.00**

**Flashcards only: \$ 5.50**

**TITLE: ALLIGATOR MIX****PUBLISHERS NAME: DEVELOPMENTAL LEARNING MATERIALS**

**DESCRIPTION:** Alligator Mix will help students increase their skills in both adding and subtracting numbers 0 through 9. As an alligator appears in a swamp, apples which show addition and subtraction problems will move toward the alligator's mouth.

As the apple with the problem approaches the alligator's mouth, the player must determine if the answer in the alligator correctly matches. If so, the player opens the alligator's mouth by pressing the space. Five alligators will appear in a single game. The speed of the "feeding" increases as more alligators appear. Hits and misses are recorded below.

**PRICE: Complete Package: \$39.00****Diskette Only: \$36.00****Flashcards only: \$ 5.50****TITLE: ANALOGIES****PUBLISHERS NAME: PROGRAM DESIGN, INC.****HARDWARE REQUIREMENTS:** Voiced cassette recorder- not attached to computer

**DESCRIPTION:** Contains 6 programs that teach what an analogy is and what the common types are, provide a method for analyzing analogies and provide practice in handling all types of analogies. Final lesson is an analogies test.

**PRICE: \$23.95****TITLE: ACADEMIC SKILL BUILDERS****PUBLISHERS NAME: DEVELOPMENTAL LEARNING MATERIALS**

**DESCRIPTION:** DLM's Academic Skill Builders incorporates exciting arcade games with training in the four basic math operations. This challenging math series of six individual titles provides a complete, structured package of print and microcomputer software to train proficiency in addition, subtraction, multiplication and division.

Developed by Dr. Jerry Chaffin of the University of Kansas, each of the six complete packages includes a teacher's manual, a microcomputer diskette with instruction sheet, duplicating masters for worksheets and progress sheets, and full color, thematic flashcards. Each of the six packages (Alien addition, Minus Mission, Meteor Multiplication, Demolition Division, Alligator Mix, and Dragon Mix) offers an easy to run game structure emphasizing fast action, colorful, exciting graphics, and increasing levels of difficulty.

The teacher's manual provides complete, easy to follow directions for use with students of varying abilities, in setting up goals for individual achievement, monitoring progress, and interpreting individual data. Step by step instructions for the use of the microcomputer diskette, as well as all game operations, are included. The motivating full color flashcards provide for both individual and group practice.

**PRICE: \$220.00****TITLE: AREA UNDER A CURVE****PUBLISHERS NAME: MATH SOFTWARE**

**DESCRIPTION:** Demonstrates the method of lower sum, upper sum, and Riemann sum approximations for the area under a curve through the use of color and high resolution graphics. The user may choose the type of summation process desired as well as the number of rectangles to be used for the approximation. The curve is



graphically represented, the rectangles are shown in color and areas are quantitatively expressed. After completing the approximations the accuracy of that particular process is shown relative to the actual area under the curve. Ideal for introducing the definite integral to a beginning calculus class.

**PRICE:**

**TITLE: ARITHMETIC OF FUNCTIONS**  
**PUBLISHERS NAME: MATH SOFTWARE**

**DESCRIPTION:** Graphs the function  $f$ , the function  $g$ , and then the function  $h = \text{function } f \text{ operation function } g$ . This process also generates some exciting relationships which can be seen from the graphic displays. Examples include certain limits such as  $(\sin x)/x$ ,  $1/x//x$ , and  $x \log x$ . The menu selections also generate graphic verification of certain trig relationships including a double angle formula, some half-angle formulas, and some quotient relationships.

The eight menu selections for each function followed by the four choices for the operation provide two hundred-fifty six choices. The additional option for user-supplied functions enables a very wide spectrum of both classroom instruction and also individual learning.

**PRICE:**

**TITLE: BASIC MATH SKILL GAMES**  
**PUBLISHERS NAME: MENTOR SOFTWARE, INC.**

**DESCRIPTION:** Do your students have problems with addition, subtraction, multiplication or division? If your answer is yes, BASIC MATH SKILL GAMES is designed for your classroom use. The programs present drill and practice at three different levels of problem difficulty. Certain programs are designed to increase speed while others develop accuracy. All programs combine graphics with gaming techniques that encourage students to drill and practice. Twelve programs plus a teacher's guide. Elementary - Jr. high

**PRICE: \$94.95**

**TITLE: BASIC MATH SYSTEM H**  
**PUBLISHERS NAME: MATHWARE/MATH CITY**

**DESCRIPTION:** A set of five complete-in-themselves disks which cover a 2nd through 8th grade math curriculum. Designed for home use, each disk contains complete instructions on use of particular keys and answer formats, daily record storage, and more than 35 completely different teaching modules. These modules can be used to teach concepts which are entirely new to the student, as well as to provide review and drill. The five disks, each specializing in particular math function, are:

Addition and Subtraction  
Multiplication and Division  
Fractions Concepts & Operations  
Decimal Concepts & Operations  
Ratios, Percents, and Negative Integers

A subset of up to 10 of the modules on a disk can be chosen for a particular lesson; the initial difficulty level of each module can also be selected, varying in increments from easy to difficult. These initial difficulty levels are automatically adjusted as the student proceeds through the lesson, so that material with which he is fairly proficient is upgraded. The constantly changing nature of the problems assures a student's concentration and retention.

**PRICE: \$59.00**



**TITLE: BINOMIAL MULTIPLICATION****PUBLISHERS NAME: MATH SOFTWARE**

**DESCRIPTION:** This program uses the Apple's high-resolution screen and color graphics to demonstrate that  $(x+A)(x+B) = x^2 + Ax + Bx + AB$  is really a true equation. This equality is shown through the use of a very convincing area argument. Have your students ever wondered why  $(x + 4)(x + 4)$  is called a "perfect square" and why its result  $x^2 + 8x + 16$ , is known as a "perfect square trinomial?" Or have you or your students considered geometrically why  $(x + 3)(x - 3) = x^2 - 9$  is known as a "difference of squares?" This program will definitely convince them of the aptness of these titles.

The user may input any value of "A" or "B" from -5 to 5 inclusive. Then through the use of Apple's high-resolution graphs the equivalence of the right and left hand sides of equation (1) is shown through the use of areas. Once your students have seen this demonstration their appreciation and understanding of Binomial Multiplication will be greatly enhanced.

**PRICE:****TITLE: CHECKS AND BALANCES****PUBLISHERS NAME: THE COMPUTER CONNECTION**

**DESCRIPTION:** An introduction to the world of checking accounts, designed to teach elementary age children how to open and maintain a checking account. High Resolution graphics with sound and music makes this "hands-on" learning experience fun and educational.

**PRICE: \$35.00****TITLE: COMPU-MATH I****PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** The first release in a brand new Edu-Ware instructional series, this total instructional system is unlike anything that has ever before been available for the personal computer. More than merely presenting problems in "drill and prompt" programs, this series begins by testing the user's current skills, and then recommends which of six learning units he should enter to improve them.

**PRICE: \$39.95****TITLE: COMPUTER GRAPHING EXPERIMENTS- VOLUME 1****PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.****DESCRIPTION:**

- \* Students create and compare graphs of linear, quadratic, and trigonometric functions; conic sections; inequalities; and logarithmic, exponential, and absolute value functions.
- \* Provide independent or small group mathematical experiences.
- \* Supplemental to all Algebra I, Algebra II, Trigonometry, and Pre-Calculus courses.
- \* Can be utilized by same students as knowledge increases.
- \* Each volume contains a disk, backup disk, black-line masters, plus answers and teachers notes.

No programming knowledge required.

Volume 1 contains: Algebra One & Two- Linear and quadratic functions and inequalities, Absolute value, Polynomials, Exponential and logarithmic functions.

**PRICE: \$45.00**

**TITLE: COMPUTER GRAPHING EXPERIMENTS- VOLUME 2**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

**DESCRIPTION:** Trigonometric Functions- Sine, Cosine, Tangent, Cotangent, Period, Amplitude, Phase shift, and Polar coordinates.

**PRICE: \$45.00**

**TITLE: COMPUTER GRAPHING EXPERIMENTS- VOLUME 3**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

**DESCRIPTION:** Conic Sections- Parabolas, Ellipses, Hyperbolas, General Quadratic functions, Inequalities.

**PRICE: \$45.00**

**TITLE: COMPUTER MATH GAMES, VOLUME 1**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

**DESCRIPTION:** MESSAGE (grade level 1-9) - Addition, subtraction, multiplication or division practice using whole numbers, decimals, fractions, or integers; practice finding the percent of a number, finding what percent one number is of another, or finding a number if a percent of it is known; practice with equivalent fractions, improper fractions, or mixed numerals.

**APPLE SQUARE-OFF** (grade level 4-9) - Practice plotting ordered pairs of whole number or integers.

**DOT-DOT-PLOT** (grade level 4-9) - Practice plotting ordered pairs of whole number or integers.

**MATH BOXES** (grade level 2-9) - Addition, subtraction, multiplication, or division practice using whole numbers, decimals, or integers.

**BEAN AND PITS** (grade level 2-9) - Practice with place value and formulating a problem-solving strategy.

**PRICE: \$45.00**

**TITLE: COMPUTER MATH GAMES, VOLUME 2**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

**DESCRIPTION:** YOUR NUMBER'S UP (grade level 2-9) - Practice with place value of whole numbers or decimals.

**MATH BASKETBALL** (grade level 1-9) - Timed practice with basic addition, subtraction, multiplication, or division facts.

**MATCH UP** (grade level 4-9) - Practice combining three whole numbers using addition, subtraction, multiplication, division, or exponents.

**TIC-TAC-MATH** (grade level 1-9) - Addition, subtraction, multiplication, or division practice using whole numbers, decimals, or integers.

**HORSE RACE** (grade level 1-9) - Timed practice with basic addition, subtraction, multiplication, or division facts.

**PRICE: \$45.00**

**TITLE: COMPUTER MATH GAMES, VOLUME 3**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

**DESCRIPTION:** WAR (grade level 1-3) - Practice recognizing, counting, and comparing whole numbers less than or equal to 13.

FLASH (grade level 1-9) - Timed practice with addition, subtraction, multiplication, or division of basic facts.

SQUARE IT (grade level 6-9) - Timed practice finding the square of one or two digit sums or differences.

REDUCE (grade level 4-9) - Practice recognizing whether or not a fraction can be reduced; timed practice with reducing fractions.

IN BETWEEN (grade level 2-4) - Practice with counting and the notion of betweenness.

TWENTY-ONE (grade level 2-9) - Practice with addition of whole numbers less than or equal to 11; practice with formulating a strategy and missing addends.

ZERO (grades 6-9) - Practice finding the sum of integers.

PRICE: \$45.00

**TITLE: COMPUTER MATH GAMES, VOLUME 4**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

DESCRIPTION: NIM 25 (grade level 3-9) - Practice counting to 25 and formulating a strategy.

MATH DARTS (grade level 1-9) - Timed practice in addition, subtraction, multiplication, or division of whole numbers from 0 through 100.

FIVE HUNDRED (grade level 2-9) - Timed practice with compact notation, expanded numerals, or place value identification.

WOODCHUCK (grade level 1-9) - Practice in addition, subtraction, multiplication, or division of whole numbers up to 255.

COVER UP (grade level 1-9) - Practice in addition or subtraction of whole numbers from 0 to 100.

PRICE: \$45.00

**TITLE: COMPUTER MATH GAMES, VOLUME 5**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

DESCRIPTION: MIX UP (grade level 4-9) - Math or computer vocabulary practice.

PRICE: \$30.00

**TITLE: CONTROL SYSTEM DESIGNER**

**PUBLISHERS NAME: SMART WARE**

DESCRIPTION: A software system for the design of single input, single output control systems described by transfer functions. It consists of two programs, one a tool for designing compensators, and the second a root locus program for evaluating designs.

The compensator design tool is SmartWare's program PolyMan. PolyMan is a versatile interactive program for manipulating polynomials with coefficients in the field of real numbers. It has provisions for entering the uncompensated open loop transfer function as polynomials or roots of polynomials. Compensator transfer functions can be entered similarly. Then, PolyMan can be used to form the compensated open loop transfer function polynomials. PolyMan also includes many other modes of a more general nature that are useful for analyzing the control system

design. PolyMan is limited to working with polynomials of degree not exceeding twenty.

The root locus program accepts the compensated control system open loop transfer function polynomials and generates either the zero or 180 degree root locus in HGR2 graphics. By setting a software switch, the root locus and gain values can be printed while the locus is being plotted. The root locus graphic may be saved to disk for later recall and comparison.

Once the root locus graphic has been saved to disk, it can be recalled using printer-specific "grab-the-wire" graphics routines that are not supplied by SmartWare.

Data for each control system design can be saved to disk under a user-supplied name for later recall and further analysis or design modification.

**PRICE: \$34.95**

**TITLE: COUNT AND ADD (GRADES K-2)**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** COUNT gives your students immediate visual and auditory feedback as they practice counting groups of objects. The program adapts its difficulty level to the skill of the student. ADD uses the full power of Apple graphics as two groups of objects move across the screen and join to make the concept of addition clear.

**PRICE: \$14.95 cassette**

**\$19.95 disk**

**TITLE: COUNTING REE**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** This friendly system introduces young learners (ages 3-6) to counting, addition, subtraction, shape discrimination, weight, and measurement.

Features a learning management mode, which allows parents and teachers to preset the system, with emphasis and duration tailored to an individual child's needs.

**PRICE: \$29.95**

**TITLE: DECIMAL SKILLS NO. 7878**

**PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Program includes readiness skills, addition, subtraction, multiplication, and division of decimals.

Features three instructional modes, including:

**Readiness Mode.**

Provides speed drills to help students master basic concepts. Student or teacher can select the number of problems and time limit per drill session for each package: division facts, recognition of place value, or conversion to improper fractions.

**Practice Mode.**

Helps students improve speed and accuracy, once they've understood the basic skill. The student calculates answers on paper, then enters them into the computer for grading. After two incorrect answers for a given problem, the computer switches to an instructional sequence, showing the correct operation, step-by-step, and allowing the student to enter the right answer. As students complete individualized instruction, they have the option to move on to a Mastery Quiz.

**Instruction Mode.**

Gives extra help to students who haven't mastered all the steps in a computational skill. Every session features five problems, and each is done on the screen, step-by-step. Students enter the subcalculations along the way. After a mistake, the computer



permits one more chance. If the second try is wrong, it corrects the mistake and continues.

At last there's software that goes beyond drill and practice. New Milton Bradley Educational Software helps students understand how to get the right answer. Easy-to-use programs in Math feature clear, compelling graphics. Students learn the basic skills and move up to mastery. Programs focus on specific learning needs, so students can zero in on the precise areas where they need work. The student who needs practice on decimal remainders doesn't have to view through long generalities about long division. That's why Milton Bradley Educational Software adapts so easily to your lesson plans.

Every unit contains lesson diskette; Teacher's Guide; and reproducible activity sheets, keyed to each skill, so you can give students even more extra help. Your best students will be stimulated. Your underachievers can make steady progress at their own pace. And you'll have more time to do what you do best: teach.

**PRICE: \$44.95**

**TITLE: DECIMALS & PERCENTS**

**PUBLISHERS NAME: EDUCATIONAL TEACHING AIDS DIV.**

**DESCRIPTION:** (113) levels) Addition, Subtraction, Multiplication, Division, Names & Numbers, Changing Percents to Decimals & visa versa applications. Teacher's Guide.

**PRICE: 2 Disks \$119.95**

**TITLE: DEMOLITION DIVISION**

**PUBLISHERS NAME: DEVELOPMENTAL LEARNING MATERIALS**

**DESCRIPTION:** Demolition Division gives students an opportunity to practice the division of numbers with answers 0 through 9. Tanks moving from the left side of the screen toward cannons on the right side carry division problems. As the tanks move toward the cannons, the player places the answer and fires. If the tank reaches the cannons before being destroyed by the correct answer, the entire cannon is exploded. Hits and misses are recorded in the bunkers in the lower right and left sides of the screen.

**PRICE: Complete Package: \$39.00**

**Diskette Only: \$36.00**

**Flashcards Only: \$ 5.50**

**TITLE: DIPT - DELUSIONS, ILLUSIONS, PUZZLES & TRICKS**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** What's DIPT? It's fun, challenging, disturbing...and rewarding! A potpourri of mind-benders.

Center stage is a big puzzle, daring the student to guess its secret. It explores the misconceptions and resulting illusions stemming from the use of directional terms appropriate to plane geometry, in solid geometry situations. It is a superb puzzle - guaranteed to take the involved student into space!

In addition the program produces mazes, some of which are quite impossible! And all this is done, (of course), to real live maze-building music. You can actually hear the walls and pathways being constructed.

An occasional one-liner pops out - a real brain teaser, seemingly never the same as the last time you played it. The reason is quite obvious. The program picks each randomly, from a collection of over 40 it has stored to use!

A variety of puzzles. And what would a puzzle be without a puzzle within a puzzle? And the illusions, are anybody's guess! For the teacher - the answers? Oh no! Instead, illuminating

records are kept of each student's use of the program, as each attempts to crack the big puzzle, and returns to try again.  
**PRICE:**

**TITLE: DIVISION FACTS**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Drill and practice in the basic division facts. Choice of exercise types. Performance report given at end.

**PRICE:**

**TITLE: DIVISION SKILLS NO. 7883**

**PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Program includes 90 basic facts, one-digit divisors, two-digit divisors, whole number remainders, fractional remainders, and decimal remainders.

Features three instructional modes, including:

Readiness Mode.

Provides speed drills to help students master basic concepts. Student or teacher can select the number of problems and time limit per drill session for each package: division facts, recognition of place value, or conversion to improper fractions. Practice Mode.

Helps students improve speed and accuracy, once they've understood the basic skill. The student calculates answers on paper, then enters them into the computer for grading. After two incorrect answers for a given problem, the computer switches to an instructional sequence, showing the correct operation, step-by-step, and allowing the student to enter the right answer. As students complete individualized instruction, they have the option to move on to a Mastery Quiz.

Instruction Mode.

Gives extra help to students who haven't mastered all the steps in a computational skill. Every session features five problems, and each is done on the screen, step-by-step. Students enter the subcalculations along the way. After a mistake, the computer permits one more chance. If the second try is wrong, it corrects the mistake and continues.

At last there's software that goes beyond drill and practice. New Milton Bradley Educational Software helps students understand how to get the right answer. Easy-to-use programs in Math feature clear, compelling graphics. Students learn the basic skills and move up to mastery. Programs focus on specific learning needs, so students can zero in on the precise areas where they need work. The student who needs practice on decimal remainders doesn't have to view through long generalities about long division. That's why Milton Bradley Educational Software adapts so easily to your lesson plans.

Every unit contains lesson diskette; Teacher's Guide; and reproducible activity sheets, keyed to each skill, so you can give students even more extra help. Your best students will be stimulated. Your underachievers can make steady progress at their own pace. And you'll have more time to do what you do best: teach.

**PRICE: \$44.95**

**TITLE: DRAGON MIX**

**PUBLISHERS NAME: DEVELOPMENTAL LEARNING MATERIALS**

**DESCRIPTION:** Dragon Mix provides practice in both multiplication and division of difficult problems using a "protective dragon" theme. A large dragon on the right of the screen is protecting

the city behind it from various invading forces. The different types of spacecraft carry multiplication and division problems as they approach the city. If a correct match is made, the fire shot from the dragon's mouth will destroy the spacecraft. Hit and misses are recorded on the pavement leading to the city at the bottom of the screen.

**PRICE: Complete Package: \$39.00**

**Diskette Only: \$36.00**

**Flashcards Only: \$ 5.50**

**TITLE: ECCENTRICITY FORM OF A CONIC**

**PUBLISHERS NAME: MATH SOFTWARE**

**DESCRIPTION:** Program for introducing and reinforcing the definition of a conic section from an eccentricity point of view. The first section defines a conic in terms of the focus, the directrix, and the eccentricity and shows these relationships on the High-Resolution screen. This section provides an excellent introduction to the topic of conics from an eccentricity viewpoint.

The second section enables the user to pick a value for the eccentricity and see the points of the conic generated using this value of the eccentricity. The high resolution screen is used to show the focus, the directrix, and the points generated using the definition and the given eccentricity. The third section enables the user to choose not only the eccentricity but also the initial distance between the focus and directrix.

The graph is then generated as in the second section. The program uses the graphing capability of the Apple II to demonstrate this eccentricity definition.

**PRICE:**

**TITLE: ELEMENTARY MATH EDU-DISK**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** The Elementary Math Edu-Disk was written and designed by a professional educator. It contains an arithmetic readiness test and four interactive lessons designed to each elementary addition, Subtraction, Multiplication, and Division, on nine different skill levels. These lessons are rich in interactive tutorials and use extensive color graphics and computer simulated voice to maintain student interest and reinforce basic concepts. The student scores are maintained on disk and are accessible only through a special teachers program (included). This program is self-demonstrating and requires little or no instructor assistance. This program is recommended for the student with no prior arithmetic experience, and as a supplement in higher level remedial situations.

**PRICE: \$39.95**

**TITLE: ELEMENTARY MATH PACKAGE 1**

**PUBLISHERS NAME: MICRO LEARNINGWARE**

**DESCRIPTION:** Place Value introduces the basic concepts of the decimal number system and place value with graphic illustrations. Includes drill and practice on place value.

Number Strings drill and practice program providing drills on addition of strings of numbers with the user providing the numbers of digits in each of the numbers and how many numbers will be in each string.

Math Drill provides drills with graphics (and large numbers) in addition, subtraction, multiplication and division. You specify the type and number of problems with total control over the level of difficulty.



Speed Drill like Math Drill with 10 levels of speed.  
**PRICE: \$24.95**

**TITLE: ELEMENTARY MATH PACKAGE II**

**PUBLISHERS NAME: MICRO LEARNINGWARE**

**DESCRIPTION:** Decimals introduces the basic concept of decimals with graphic illustrations. Offers variety of drills one of which spells out the fraction like "THREE HUNDREDS" (randomly generated) and asks the student for the decimal.

Fractions introduces fractions with graphic illustrations. Provides drill and practice with fractions.

Bagels, a number guessing game. The computer randomly selects a three digit number. The student tries to guess the number with the computer giving hints on the location of digits.

Stones, a number game with graphic illustrations where the student plays against the computer in trying to pick up the last stone by picking up only so many at a time.

Factor, a number game where the student is presented a string of consecutive numbers (you decide how many); and the student selects numbers from the string. The student receives points for the value of the number selected; and the computer gets all the factors of the number. Play continues until all numbers are gone.

**PRICE: \$24.95**

**TITLE: ELEMENTARY NUMERICAL TECHNIQUES FOR ORDINARY DIFFERENTIAL EQUATIONS**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** This manual is intended for a post-calculus differential equations course. The student must be familiar with the techniques of integration usually covered in a first course in calculus. The most frequently used techniques require the utilization of the standard formulas for trigonometric and exponential functions and their inverses, integration by trigonometric substitutions, integration by parts, and integration by partial fractions decomposition. The student must also be acquainted with the definition of a power series, its interval of convergence, and some of the more common tests for convergence. Also the calculus operations on series should be familiar.

This manual is constructed to complement a standard textbook by having the student study the numerical techniques immediately after having covered the corresponding material in the text. It is an attempt to instill a recognition of the power of numerical methods, and show a basic plan for attacking a nonstandard problem. As differential equations are encountered in "real-life" applications problems, they very seldom are one of the types found in existing textbooks for which a straight forward analytical method produces the solution. Most equations are non-linear, non-homogeneous, with non-constant coefficients, and hence non-solvable by analytical methods.

**PRICE: \$65.00**

**TITLE: ESSENTIAL MATHEMATICS!**

**PUBLISHERS NAME: BERTAMAX, INC.**

**DESCRIPTION:** Over 500 lessons are available in this tested and revised series of drill-and-practice lessons, some with activities following as individual programs, by strand, or grade-level sets.

**PRICE: 7 programs \$69.95**



**TITLE: EXPANDED NOTATION****PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** This disk uses the same format as the programs with the 12 - prefix. A numeral is presented in expanded form and the student must write the numeral. Place value is also introduced.

Ten lessons of twenty presentations each may be selected. Skills begin with simple presentations of TENS and ONES. The lessons then build to THOUSANDS, HUNDREDS, TENS AND ONES.

This area is frequently difficult for many students. Now there is enough practice that every student can master the concept.

**REGULAR FEATURES**

- Upper/lower case letters
- STUDENT PLANNING
- CREATE
- MODIFY
- DELETE

**PRICE: \$29.95****TITLE: EXPLORATORY DATA ANALYSIS****PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** One recent thrust in statistics, primarily through the efforts of John Tukey, has produced a wealth of novel and ingenious methods of data analysis. In his 1977 book, *Exploratory Data Analysis*, and elsewhere, Tukey has expounded a practical philosophy of data analysis which minimizes prior assumptions and thus allows the data to guide the choice of appropriate models. Four major ingredients of exploratory data analysis stand out:

Displays reveal the behavior of the data and the structure of the analyses;

Residuals focus attention on what remains of the data after some analysis;

Re-expressions, by means of simple mathematical functions, such as the logarithm and the square root, help to simplify behavior and clarify analyses; and

Resistance ensures that a few extraordinary data values do not unduly influence the results of an analysis.

Exploratory data analysis (EDA) techniques have added a new dimension to the way that people approach data. These techniques easily allow students and teachers alike to uncover features concealed among masses of numbers. Unfortunately, the diversity of these techniques has at times discouraged students and data analysts who may want to learn a few methods without studying the full collection of exploratory tools. In addition, the lack of precisely specified algorithms has meant that computer programs for these techniques have not been widely available. The absence of software has delayed the widespread adoption of exploratory methods.

This package of computer programs and text, *Applications, Basics, and Computing of Exploratory Data Analysis (ABCs of EDA)*, provides the needed tools to make exploratory analysis techniques readily available. The emphasis is on nine exploratory techniques that are most often useful: stem-and-leaf displays, letter-value displays, boxplots, x-y plotting, resistant line, smoothing data, coded tables, median polish, and rootograms. In the book, each of these techniques is covered in a chapter which lays the foundations for understanding the technique, describes useful variations, illustrates applications to real data, and provides computer programs in FORTRAN and BASIC.

The student learning EDA soon becomes familiar with many pencil-and-paper techniques for data display and analysis. In addition, the computer programs permit students and teachers alike to: Concentrate on the results rather than the arithmetic; Explore a large amount of data; Eliminate tedious arithmetic and the errors that inevitably creep in; and

Combine exploratory methods with other data analytic techniques already programmed.

Most of the text requires no college-level mathematics and no more than an introduction to statistical concepts. It is designed to serve as a supplementary text to introduce the ideas and techniques of exploratory data analysis into a beginning course in statistics. The text provides two detailed outlines to illustrate incorporating EDA techniques into curriculum.

After studying the examples and gaining experience with the EDA techniques, students who already know some statistics may want to learn more about how an EDA technique compares with a similar traditional method. Special sections provide background information. Each chapter also contains a short discussion of programming details, including the algorithm used by the computer program, alternative methods, and potential implementation difficulties. Appendices provide information for those who wish to incorporate the programs into existing software.

**PRICE:**

**TITLE: FACT SHEETS**

**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**HARDWARE REQUIREMENTS: Printer**

**DESCRIPTION:** This worksheet generator is a great teacher time-saver. If you ever write timed tests on multiplication facts or generate drills on addition and subtraction facts, this is a program you'll use over and over.

FACT SHEETS generates worksheets and corresponding answer keys for math facts. The program is totally menu driven. First,, the teacher selects:

1. addition
2. subtraction
3. multiplication
4. division

Under each category the teacher may select from a list of objectives, e.g.

facts 0-5  
facts 5's only  
etc.

A worksheet and answer key over the exact skill needed will be generated.

All problems will be random.

Multiple worksheets may be generated over the same objective. Each will be unique.

The teacher has the option of entering two full lines of identification or instructions at the top of each worksheet.

**PRICE: \$49.95**

**TITLE: FACTORING WHOLE NUMBERS**

**PUBLISHERS NAME: QUALITY EDUCATION DESIGNS**

**DESCRIPTION:** (12 programs, Teacher's Manual)  
Tutorial Programs

- The Rectangle Game
- Guess and Test
- The Sieve of Eratosthenes
- How Many Factors?
- The Euclid Game
- Factoring Finale

Game/Exploration Programs

- Factor Pairs
- Pairs and Squares
- Primes and Composites
- Exponents
- Highest Common Factor
- Least Common Multiple

**PRICE: \$90.00**

**TITLE: FRAC-DEC-PERCENT**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** A program to provide drill in the conversions between fractions, decimals, and percents. Special help option included. Performance reports produced.

**PRICE:**

**TITLE: FRACTION RECOGNITION**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** This program makes extensive use of high-resolution graphics, color and sound to teach a student to recognize fractions. Each problem is displayed as a rectangle, parts of which are shaded. The student is asked to count the number of parts in the whole box, and then to count the number of parts that are shaded. If a student does well, the terms "numerator" and "denominator" are introduced. If the student continues to do well, the problem display changes to a series of rectangles, some of which are shaded and some of which are not. Any time the student makes a mistake, the computer counts the appropriate parts of the display by placing numbers within those parts and beeping as it counts. The high-res graphics, color, sound, and use of upper and lower case letters on the high-res screen make this a most attractive program. With it, four-year-olds can be taught to recognize fractions, and remedial high-school students will enjoy learning a topic they long ago learned to hate.

**PRICE: \$14.95 cassette**

**\$19.95 disk**

**TITLE: FRACTIONS**

**PUBLISHERS NAME: QUALITY EDUCATION DESIGNS**

**DESCRIPTION:** (24 programs, Teacher's Manual)  
Tutorial Programs

- Concepts
- Equivalent Fractions
- The Division Meaning
- Fractions and Measurement
- Multiplying Fractions
- Multiplying Fractions
- Multiplication Shortcuts
- Adding Fractions
- Comparing Fractions
- Mixed Numbers

- Division the Safe Way
- Division and Inverses
- Compound Fractions

Game/Exploration Programs

- Placement Test
- Frac Tac Toe
- Decimal Patterns
- Curious Measurements
- Target
- Factor Fracture
- The Arrow Problem
- Farey Sequences
- Fracjack
- Divide and Conquer
- Take a Walk
- Continued Fractions

PRICE: \$175.00

#### TITLE: FRACTIONS

PUBLISHERS NAME: EDUCATIONAL TEACHING AIDS DIV.

DESCRIPTION: (71 levels) Addition, Subtraction, Multiplication, Division, Fractions, Decimals, Reducing, Improper, Mixed, Teacher's Guide.

PRICE: \$95.95

#### TITLE: GOING TOGETHER - SCATTERPLOTS & CORRELATION COEFFICIENTS

PUBLISHERS NAME: MICRO POWER & LIGHT CO.

DESCRIPTION: This program describes the relationship between two variables, using the scatterplot and correlation coefficient, more specifically, it is designed to assist you in learning:

- (1) The meaning of the term "correlation"
- (2) Four kinds of relationships between two variables
- (3) How to use the scatterplot graph
- (4) How to use a formula for summarizing the relationship between variables

While guiding the user through the material, the program also makes it easy for the user to alter the sequence of instruction - providing frequent review opportunities, an occasional quiz, and a convenient topic selection menu:

- (1) The definition of statistical relationship and correlation
- (2) Scatterplots - explanation and illustration
- (3) Raw score formula for the correlation
- (4) Deviation score formula for the correlation

To use this program effectively, the user needs first to have a basic understanding of such statistical concepts as the mean, variance and standard deviation. These topics are treated at length in the related programs entitled:

What's the Score?	Item #3011
On the Average	Item #3051
Off Center	Item #3141

PRICE:

#### TITLE: GUESS THE NUMBER

PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE

DESCRIPTION: This program plays an educational game which helps youngsters to recognize the relative size of different numbers. The computer thinks of a number between 1 and 50, and asks the player to guess it. The guess then "sinks" or "floats" depending on whether it's too large or too small. The speed of the sinking or floating depends on how close the guess is to the secret number. When the number is finally guessed, the screen and



speaker go wild!

**PRICE: \$14.95 cassette**

**\$19.95 disk**

**TITLE: GUESS THE RULE**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** This program plays an algebra guessing game, in an arcade style format. The object is to guess the computer's secret equation, which is hidden in a box on the screen. The computer gives hints in the form of ordered pairs that satisfy the equation. The player can score points either by guessing additional ordered pairs, or by guessing the rule itself. The secret equations range from equations like  $y = x + 5$ , which is easy enough for an elementary school student to play successfully, to equations like  $y = 3x^2 - 8x + 7$ , which present a real challenge to college students and even to high school math teachers. This game helps develop the concept of a function, and familiarizes students with ordered pairs and with tables of values. It also builds skill in arithmetic, in writing equations, and in logical thinking. Besides all that, it's fun!

**PRICE: \$14.95 cassette**

**\$19.95 disk**

**TITLE: INTERMEDIATE MULTIPLICATION AND DIVISION**

**PUBLISHERS NAME: KLEINHAMMER BUSINESS SOFTWARE**

**DESCRIPTION:** 21 skill levels of multiplication and division.

**PRICE: \$70.00**

**TITLE: INVADER ROUND UP**

**PUBLISHERS NAME: ZEITGEIST**

**DESCRIPTION:** The galaxy has been invaded! The student's goal is to capture all invaders. The computer will search for the invaders and provide a basic location (called warp) and up to three adjustments (called bias). The student must add or subtract, as indicated, to get the current location. If the answer is correct, a laser beam transports the invader to a holding area. If incorrect, the invader escapes. When all invaders are captured, a space ship appears and transports them to a distant galaxy. The student may then continue with a new group of invaders or may quit. By continuing, the total score (i.e., total number of invaders captured) can be increased.

**OBJECT -** to capture invaders and establish a record total score.  
**INSTRUCTIONAL GOAL -** Drill and practice in addition and subtraction of whole numbers.

**PRICE: \$49.50**

**TITLE: JUNIOR HIGH MATH DISK**

**PUBLISHERS NAME: MICROPHYS PROGRAMS**

**DESCRIPTION:** Contains the following programs:

**MAGIC SQUARES -** The computer randomly generates 3x3 magic squares. The values of six of the nine elements will be displayed and the student is required to compute the values of the other 3 elements.

**MULTIPLICATION -** Enables the student to develop facility in dealing with simple multiplication problems.

**DIVISION -** Enables the student to develop facility in dealing with simple division problems. Two to seven digit integers may be involved.

MODULAR ARITHMETIC - Enables the student to develop facility in dealing with addition, subtraction, and multiplication problems in randomly generated modular systems.

PROPORTION PROBLEMS - Enables the student to develop facility in dealing with the solution of problems involving proportional relationships of the type  $X/a = b/c$ .

PERCENT PROBLEMS - Enables the student to develop facility in dealing with the solution to verbal problems involving percent relationships.

ADDITION OF FRACTIONS - Enables the student to develop facility in dealing with the addition of randomly generated fractions.

SUBTRACTION OF FRACTIONS - Similar to Addition of Fractions but involving subtraction.

MULTIPLICATION OF FRACTIONS - Similar to Addition of Fractions by involving multiplication.

DIVISION OF FRACTIONS - Similar to Addition of Fractions but involving division.

MODE, MEDIAN, AND MEAN - Enables the student to develop facility in statistically analyzing a table of randomly generated data. The greatest, smallest, and range of values, the mode, median, and mean are the six quantities the student must determine.

BAR GRAPH ANALYSIS - Enables the student to develop facility in statistically analyzing a bar graph of randomly generated data values.

DECIMALS I - Enables the student to develop facility in dealing with the addition and subtraction of decimals. Each numerical value may have one, two, or three places to the right of the decimal point.

DECIMALS II - Similar to Decimal I but dealing with the multiplication and division of decimals.

VERBAL PROBLEMS I - NUMERICAL RELATIONSHIPS - Enables the student to develop facility in dealing with the solution to verbal problems involving simple numerical relationships.

PRICE: \$180.00

TITLE: LAZER CHASER

PUBLISHERS NAME: INDIAN HEAD SOFTWARE

DESCRIPTION: Use a game format to give practice in addition, subtraction and multiplication of integers. The student begins as a cadet and tries to reach the rank of commander. Promotions are given according to a point system where points are earned by locating and destroying the invisible phantom cruiser. The program uses High-Resolution graphics and special sound effects.

PRICE:

TITLE: LIMITS OF SEQUENCES

PUBLISHERS NAME: MATH SOFTWARE

DESCRIPTION: A demonstration program for use by the teacher which gives a very convincing argument that the derivative of the sine function is indeed the cosine function. Uses color and the

Apple's high resolution graphics to enhance the student's understanding of this important result.

Initially the sine function is graphed and then moved tangents to the sine function are drawn and the values of the slopes recorded. Then the graph of the slope values is plotted as the tangents again move along the curve. finally, the cosine function is plotted earlier. Once your students see this demonstration, their understanding of the graphical relationships of a function, its derivative, and of the tangent lines to the function in general as well as the result that the derivative of the sine function is the cosine function will be greatly enhanced.

**PRICE:**

**TITLE: MAT MAN**

**PUBLISHERS NAME: SMART WARE**

**DESCRIPTION:** An interactive matrix manipulation program which allows the user to specify both names and dimensions for real matrices he will process with the over 25 modes available in the program. Modes include:

- \* Matrix addition, subtraction, multiplication, transposition and inversion
- \* Reduction to row echelon (Hermite Normal) form
- \* Cholesky square root and UDU factorization of positive definite symmetric factors
- \* Modified Gram-Schmidt orthonormalization
- \* Keyboard entry of matrix name, dimensions, and element values
- \* Specification of identity matrix name and order
- \* Specification of dimensions and element value for a matrix with identical elements
- \* Row serial display of matrix values
- \* Matrix array presentation of matrices on screen or on printer (slight customizing required)
- \* Editing of any element of any matrix contained in the active data base
- \* Disk storage and retrieval of matrix names, dimensions, and element values.

User's manual describes operation of the program and describes applications in mathematics and engineering. Customizing instructions allow tailoring of the program through deletion of modes or addition of user supplied modes.

In a 48K Apple II system with ROM Applesoft and DOS active, it is possible to store and operate on 35 10x10 matrices. In a 32K Apple II system with ROM Applesoft and DOS active, it is possible to store and operate on 12 10x10 matrices. The number of matrices that can be stored depends on the dimensions of the largest matrix being processed with the program.

**PRICE: \$29.95**

**TITLE: MATCHING AND USING NUMBERS**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for First graders

In separate sections, the concepts of matching graphic symbols with numerals is introduced. The program is divided into three sections so the student can progress from one to another as each skill is mastered.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: MATCHING GEOMETRIC FIGURES**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**ED-108**

**DESCRIPTION:** Program for Fourth graders  
Geometric figures are reproduced on the screen, facing in different directions. Student is shown how the figures are the same, regardless of the direction in which they face. Game, requiring accurate matching, helps motivate the student to pay attention and "find the match".  
**PRICE: Diskette: \$15.00**  
**Cassette: \$13.00**

**TITLE: MATH FACTS GAMES-1**  
**PUBLISHERS NAME: BERTAMAX, INC.**  
**DESCRIPTION:** Uses a game format to provide drills on basic facts. Three levels of difficulty. For operations: Addition, subtraction, multiplication, and division. Grade levels 2 to 6.  
**INCLUDES:**  
Countdown  
Secret Word  
Tic-Tac-Toe  
Computer Challenge  
**PRICE: Tape \$19.95, Disk \$24.95**

**TITLE: MATH I**  
**PUBLISHERS NAME: SILWA ENTERPRISES**  
**DESCRIPTION:** Over 500 entries. Pre-calculus level Algebra, Geometry, and Trigonometry.  
**PRICE: \$24.95**

**TITLE: MATH II**  
**PUBLISHERS NAME: SILWA ENTERPRISES**  
**DESCRIPTION:** Over 500 entries. Geometry and Trigonometry with graphic displays of problems.  
**PRICE: \$34.95**

**TITLE: MATH SOFTWARE**  
**PUBLISHERS NAME: MATH SOFTWARE**  
**DESCRIPTION:** Take an Apple into the classroom! Exciting software dramatically demonstrates concepts which are being taught. Math Software products can help to make you a better teacher and also provide you with better students! Taylor Series, Function Grapher 48K, Arithmetic of Functions, Binomial Multiplication, Solving Linear Systems 48K, Graphic Integration Theory, Midpoint & Trapezoidal Rules, Rational Function Grapher, Sine and Cosine Grapher, Solids of Revolution, Limits of Sequences, Polar Graphing.  
**PRICE: \$25.00**

**TITLE: MATH STRATEGY**  
**PUBLISHERS NAME: APPLE COMPUTER, INC.**  
**DESCRIPTION:**  
Math Strategy will teach you how to use visualizing in your mind's eye as a strategy for learning to memorize basic math equations correctly and quickly by moving your eyes and making mental pictures.  
The most important skills of a good mathematician are the STORAGE and RECOGNITION of correct equations and formulas. This, of course, is the emphasis of the Math Strategy program.  
This is accomplished by storing and recalling a visual image of the correct equation in your mind's eye. Before beginning with the program, then, it will be important for you to familiarize



yourself with your mind's eye. Knowing how and when to use this important faculty can help tremendously with many tasks and improve your abilities dramatically.

A famous mathematician, who had a reputation for being able to add tremendous columns of numbers in his head, was once asked how he was able to accomplish such intellectual feats. In reply, the mathematician claimed that "PE" really didn't do anything. "When someone gives me the numbers," he said, "I just make a picture of them on a blackboard in my mind's eye and wait awhile. Pretty soon a hand appears and writes the answer on the board."

Because he knew how to use his mind's eye, the mathematician was able to greatly streamline the process of addition. Research shows that training and using the mind's eye greatly helps in basic multiplication and division, too.

One of the developers of Math Strategy had a young client once who was experiencing great difficulties in his basic scholastic skills. He was particularly poor at spelling and elementary arithmetic. To check the young man's visual capabilities the author asked him if he had ever seen the movie 'Star Wars.' The boy's face lit up as he exclaimed that he indeed had seen the movie! He was then asked if he could look in his mind's eye and see the Wookie. He could describe everything that the Wookie did in great detail, even though he had only seen the movie once! Once the boy had located his mind's eye by using the image of the Wookie he was asked to watch the Wookie open his mouth and hear the funny growling sound he made, and as he did so to see the letters "W-O-O-K-I-E" printed out on the screen over his mouth. Not so surprisingly, the boy could do this easily.

From on he was directed to see all his spelling words and multiplication tables printed over the Wookie's mouth in this fashion. Whenever he wanted to spell a word or remember an equation, after that, he could simply look up at his "magic movie screen", and the Wookie would show him the answer! From that point on the young man consistently got high scores on his spelling and math tests.

Results like this are commonplace when you understand the strategy for HOW something is done. by incorporating the natural access to the process of visualization and including an element of positive motivation the boy's ability to spell and memorize came easily. That is why the Math Strategy program was organized and designed with the popular computer game type format in mind. We feel that this is important in that the use of color and sound as reinforcement and motivation for correct math more fully use the capabilities of the computer as opposed to simply simulating a blackboard or textbook.

You can find your own mind's eye by performing a simple visual task like trying to remember which way Lincoln is facing on the penny or by visualizing a familiar image like the Mona Lisa and paying attention to your accessing cues. If you are experiencing difficulty in visualizing there is no need to worry about it. Remember that this program was designed to help build just that skill. As you run the Math Program just look in the direction that the computer shows you and go through a few lessons and you will probably notice improvement in your ability to visualize already.

**PRICE:**

**TITLE: MATH WORD PROBLEMS**

**PUBLISHERS NAME: MENTOR SOFTWARE, INC.**

**DESCRIPTION:** Solving word problems is a difficult task for young children. MATH WORD PROBLEMS provides them with a technique for solving these problems and illustrations of problems to be solved. The student determines the correct operation, translates

verbal statements into mathematical sentences and solves the problem. The reading level has been controlled at or below the level of mathematical content. Six programs plus a teacher's guide. Elementary  
PRICE: \$54.95

**TITLE: MATHEMATICS**

**PUBLISHERS NAME: MILLIKEN PUBLISHING**

**DESCRIPTION:** The new 12 diskette package offers a comprehensive, objective-based curriculum with structured drill and practice for students in grades 1-8. Manager Program is included that allows teachers to make assignments and review student progress. The Sequences are designed to provide individualization of both skill and performance objectives. Student interaction with the program requires little or no supervision; therefore, it may be implemented in a variety of learning environments.

**Curriculum:** The scope of Milliken curriculum is substantial. The following Sequences are included in the package: Number Readiness (16) - grade 1. Addition (60) - grades 1 thru 8. Subtraction (54) - grades 1 thru 8. Multiplication (62) - grades 2 thru 8. Division (64) - grades 3 thru 8. Laws of Arithmetic (19) - grades 1 thru 8. Integers (32) - grades 6 thru 8. Fractions (36) - grades 3 thru 8. Decimals (56) grades 4 thru 8. Percents (15) - grades 6 thru 8. Equations (26) - grades 7 thru 8. Measurement Formulas (25) - grades 5 thru 8. The numbers in parentheses represent the number of problem levels in each Sequence. Problem levels are small, sequential steps which increase in difficulty. Problem levels are precisely defined so students may be easily placed at a level which challenges their abilities. As students demonstrate mastery or failure, the computer moves them up or down a problem level.

**Student Interaction.** The Sequences provide students with a highly motivating, success-oriented approach to mastering mathematics skills. Work is completely individualized and self-paced. All computations can be performed on the screen, eliminating the need for paper and pencil. Feedback is immediate, as are positive reinforcements, which may be varied for primary or middle school grades. If a problem is missed, the student is provided with a step-by-step solution. Scoring and record-keeping are maintained automatically.

**Management.** The package contains a Manager Program which enables teachers to maintain individual records for up to 100 students on each diskette. Features of the Manager include: The ability to make personalized assignments for individuals, or general assignments for classes. The ability to establish individualized "mastery" and "failure" levels for students. Teachers can also influence the amount of work each student completes as assigned problems levels. Automatic updating for student performance records with hard-copy printouts, if desired. Progress graphs which make problem areas for individual students easily identifiable. A security system which keeps all student data confidential.

**Documentation:** Milliken's comprehensive Teacher's Guide is an important part of the total courseware package. The Guide includes: Basic procedures to help teachers use the courseware effectively. Scope and Sequence charts. Examples of typical problems generated at each problem level. Step-by-step instructions for using the Manager Program. An Easy-Does-It Card which provides students with illustrated instructions for operating the courseware. Duplicating Masters for optional record-keeping.

**PRICE: Math Sequences, 12 Diskettes for Apple II Plus (48K)**  
**\$450.00**

## Extra Set of 12 Diskettes for back-up \$675.00

**TITLE: MATHEMATICS PACKAGE Grades 1 to 8**

**PUBLISHERS NAME: COMPAK, INC.**

**DESCRIPTION:**

The package is designed to support mathematics instruction and improve student achievement. Some instructional materials can be used for review and practice while other materials are designed to introduce and develop mathematical ideas.

Ten major concepts are covered by the package and it includes over five hundred different self-contained modules. The concept areas include: Addition, Subtraction, Multiplication, Division, Common Fractions, Decimal Fractions, Percents, Measurements, Geometry, and Elementary Algebra.

Instruction is individualized so students can move at their own pace. Each concept area contains multiple levels that range from easy to difficult. As students progress within the program, they automatically branch to the appropriate level of difficulty based on their performance score.

The Mathematics Package provides a student recordkeeping feature which allows the teacher to keep track of student progress. At the end of a lesson, the screen displays the number of problems attempted, the number correct on the first try, the number missed, the percent correct and any promotions or demotions. This same information is also automatically recorded on the teacher's "gradebook" disk. A special "gradebook" program enables the teacher to print names, add names, delete names, print scores and change scores. The printing of names and scores may be done individually or by class and on a printer if one is available.

Unique features of the programs include: an escape function which allows students to end the lesson and still retain their score; the capability to erase an answer before completing it; the capability to enter answers in the same direction as they are worked on paper (i.e. right to left for multiplication), and the effective use of attractive color graphics and sound to provide immediate student reinforcement.

The complete Mathematics Package contains ten instructional disks and one recordkeeping disk in a binder with a teacher's manual. The programs can be ordered by the complete package for \$495; by all concepts for a single grade level (i.e. the disk for Grade 7 with all ten concepts) for \$65; or by one concept for all grade levels (i.e. the concept Addition for all eight grades) for \$50. A sample disk is available for \$35 as is the Teacher's Guide Manual for \$20.

**PRICE:**

**TITLE: MATHEMATICS SERIES**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** Numerical Analysis: Hi-Res 2-Dimensional plot of any function. Automatic scaling. At your option, the program will plot the function, plot the INTEGRAL, plot the DERIVATIVE, determine the ROOTS, find the MAXIMA and MINIMA and list the INTEGRAL VALUE.16K

Matrix: A menu driven program for determining the INVERSE and DETERMINANT of any matrix, as well as the SOLUTION to any set of SIMULTANEOUS LINEAR EQUATIONS. Disk I/C for data save. Specify 55 eqn. set 48K or 35 eqn. 32K

3-D Surface Plotter: Explore the FLEGANCE and BEAUTY of MATHEMATICS by creating Hi-Res PLOTS of 3-dimensional surfaces from any 3-variable equation. Disk save and recall routines for plots. Menu driven to vary surface parameters. Demos include



Black Hole gravitational curvature equations.

PRICE: \$49.95

**TITLE: MATHGRID**

**PUBLISHERS NAME: IDEATECH CO.**

**DESCRIPTION: LEARNING OBJECTIVES:**

The program is designed to improve the student's accuracy with the 0 to 9 multiplication tables, in addition to reinforcing the concept of identifying unique points on an x-y coordinate system.

**PROGRAM DESCRIPTION:**

Mathgrid provides drill and practice with the 0 to 9 multiplication tables for one or two players. A 10 by 10 grid is drawn on the screen with the horizontal and vertical axes labeled 0 to 9. The student selects one to forty problems to be worked and the computer randomly chooses and marks that number of location. The computer then presents the problem and accepts the student's answer. The computer provides the correct answer if the problem is missed twice. A running score is kept on the screen and the total score is provided at the end of the game. Auditory feedback is used throughout the program.

**GRADE LEVEL: 3-5 and remedial**

**PRICE: \$14.95**

**TITLE: MEASUREMENT I**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Provides practice in basic measurement facts such as 1 yard = 36 inches, 1 mile = 5280 feet, etc. Can be configured to operate either in a sentence completion or multiple choice mode. Also, an optional 'beat the clock' mode is available for the student who wants timed practice. A performance report is generated at the end of a session.

**PRICE:**

**TITLE: METEOR MULTIPLICATION**

**PUBLISHERS NAME: DEVELOPMENTAL LEARNING MATERIALS**

**DESCRIPTION:** Meteor Multiplication assists students in the multiplication of numbers 0 through 9. Large meteors displaying problems within move toward a star station in the center of the screen. Answers to the problems are placed in the center of the star station. If a meteor reaches the star station before being disintegrated with the correct answer, the meteor hits the station and shatters, creating an exciting, graphic explosion. Hits and misses are recorded in the jagged universe border at the bottom of the screen.

**PRICE: Complete Package: \$39.00**

**Diskette Only: \$36.00**

**Flashcards only: \$ 5.50**

**TITLE: MIDPOINT RULE AND TRAPEZOIDAL RULE**

**PUBLISHERS NAME: MATH SOFTWARE**

**DESCRIPTION:** Provides both graphic interpretation and numerical evaluation of the Midpoint Rule and the Trapezoidal Rule. The six menu selections provide for choice of graph and number intervals. It also allows the user to supply the lower limit and the upper limit of integration. After graphically displaying the midpoint rectangles or the trapezoids, the numerical listing of the appropriate approximation is listed along with the numerical evaluation of the corresponding integral.

**PRICE:**



**TITLE: MINUS MISSION****PUBLISHERS NAME: DEVELOPMENTAL LEARNING MATERIALS**

**DESCRIPTION:** Minus Mission provides practice in subtraction of numbers 0 through 9. A large green slime at the top of the screen drips blobs of slime with subtraction problems toward a robot at the bottom. Answers are placed in the robot, thus activating the robot to fire two laser beams to destroy the slime. If the slime reaches the robot range before being destroyed by the correct answer, the robot is disintegrated into a cloud of dust. Hits and misses are recorded in the large slime at the top of the screen.

**PRICE: Complete Package: \$39.00**

**Diskette only: \$36.00**

**Flashcards only: \$ 5.50**

**TITLE: MIXED NUMBER RECOGNITION****PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** This program is similar to FRACTION RECOGNITION, but displays problems involving mixed numbers. Each problem is displayed as a series of rectangles, some of which are completely shaded and one of which is partially shaded. The student is first asked how many whole boxes are shaded, then how many parts there are in the last box, and finally how many of those parts are shaded. If the student does well, the terms "whole number", "denominator" and "numerator" are introduced. If the student makes a mistake, beeping numbers appear to count the appropriate part of the diagram. The high-resolution graphics include whole numbers that are appropriately large to go with the numerator and denominator.

**PRICE: \$14.95 cassette**

**\$19.95 disk**

**TITLE: MIXED NUMBERS NO. 7877****PUBLISHERS NAME: MILTON BRADLEY EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Program includes readiness skills, addition, subtraction, multiplication, and division of mixed numbers. Features three instructional modes, including:

**Readiness Mode.**

Provides speed drills to help students master basic concepts. Student or teacher can select the number of problems and time limit per drill session for each package: division facts, recognition of place value, or conversion to improper fractions.

**Practice Mode.**

Helps students improve speed and accuracy, once they've understood the basic skill. The student calculates answers on paper, then enters them into the computer for grading. After two incorrect answers for a given problem, the computer switches to an instructional sequence, showing the correct operation, step-by-step, and allowing the student to enter the right answer. As students complete individualized instruction, they have the option to move on to a Mastery Quiz.

**Instruction Mode.**

Gives extra help to students who haven't mastered all the steps in a computational skill. Every session features five problems, and each is done on the screen, step-by-step. Students enter the subcalculations along the way. After a mistake, the computer permits one more chance. If the second try is wrong, it corrects the mistake and continues.

At last there's software that goes beyond drill and practice. New Milton Bradley Educational Software helps students understand how to get the right answer. Easy-to-use programs in Math

feature clear, compelling graphics. Students learn the basic skills and move up to mastery. Programs focus on specific learning needs, so students can zero in on the precise areas where they need work. The student who needs practice on decimal remainders doesn't have to view through long generalities about long division. That's why Milton Bradley Educational Software adapts so easily to your lesson plans.

Every unit contains lesson diskette; Teacher's Guide; and reproducible activity sheets, keyed to each skill, so you can give students even more extra help. Your best students will be stimulated. Your underachievers can make steady progress at their own pace. And you'll have more time to do what you do best: teach.

**PRICE: \$44.95**

**TITLE: MONEY**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Fourth graders

Student is given several "examples" (reasons) why understanding of money and ability to add, subtract, multiply, and divide money are so important. Examples are random.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: MONEY! MONEY!**

**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** This program was designed to provide practice in working with concepts involving money.

High resolution graphics have been used to develop pictures of bills and coins.

The student is required to determine amounts shown; work with the concept of more and less; solve problem situations where he/she must determine the right amount of money to give for a specific item; and be able to count change correctly.

Coins are presented in correct proportions to each other.

**REGULAR FEATURES**

- STUDENT PLANNING
- Upper/lower case letters

**SPECIAL FEATURES**

- High resolution graphic representation of coins and bills
- Reinforcers are presented after 5 correct responses.

**PRICE: \$39.95**

**TITLE: MULT FACTS**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** A program to provide drill in the basic multiplication facts. The program provides for drill on a particular subset of facts such as mult by 7 or frequently missed facts. A performance report is produced.

**PRICE:**

**TITLE: MULTIPLICATION & DIVISION FUN**

**PUBLISHERS NAME: IDEATECH CO.**

**DESCRIPTION: LEARNING OBJECTIVES:**

Multiplication and Division Fun provides practice in multiplication and division facts and improves the student's performance by drilling on missed problems at the end of the

lesson.

**PROGRAM DESCRIPTION:**

This software provides practice with the multiplication and division tables. The student may choose which operation to practice and may choose to practice a specific table within the operation or problems randomly chosen from all the tables of the specified operation. Twenty problems are presented to the student. After the second error on a problem, the answer is given to the student. Feedback is given after each answer and the score is shown throughout the game in the form of the number correct and as a percentage. After all twenty problems have been attempted, the problems which were answered incorrectly are presented again as a review.

**GRADE LEVEL:** 3-5 and remedial

**PRICE:** \$12.95

**TITLE: MULTIPLICATION AND DIVISION**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Fourth graders

Student is introduced to basic multiplication facts (slight review), then is brought up to the fourth grade level. A random series of examples require answers to be typed in by student. Incorrect answers are corrected.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: MULTIPLICATION FACTS DIAGNOSTIC**

**PUBLISHERS NAME: DISK DEPOT**

**DESCRIPTION:** This is not a CAI program! The teacher will set the amount of time allowed for a student to solve a problem, the range of difficulty of the facts, and the number of practice sheets that should be printed out after the testing session. The students will take brief tests on the computer to determine facts known, facts too slow, and facts not yet mastered. The computer will then print out its findings and will provide practice sheets for slow and unknown facts. When the student has mastered all the facts, a Certificate of Mastery for that speed is issued.

**PRICE: \$49.95**

**TITLE: MYSTERY FUNCTION**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Mathematics teachers may use this program to supplement lectures on the concept of a function. This program allows the user to select a Mystery Function. The student may then enter integer values for the unknown. The computer then displays the value of the function. The student can have up to 8 ordered pairs of attempting to guess the function. Included sound effects and response evaluation.

**PRICE:**

**TITLE: NUMBER LINE**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** This program teaches the addition and subtraction of positive and negative numbers. It can be used to introduce students to the topic, to give beginning students practice and instruction, or to provide extra help and a novel approach to students who are having difficulty. The student chooses addition, subtraction, or mixed problems. If the student misses an addition problem, the correct solution is demonstrated on the number line, using a beeping arrow and flashing numbers. If the

student misses a subtraction problem, the student is helped to change it into an addition problem, and is then given another chance at solving it. If the answer is still wrong, the correct solution is demonstrated on the number line. The program comes with detailed suggestions for use in the classroom. The graphics and sound used in NUMBER LINE make it an exciting aid in any math classroom.

PRICE: \$14.95 cassette  
\$19.95 disk

**TITLE: ON THE AVERAGE - MEASURES OF CENTRAL TENDENCY**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:**

Coverage: Preliminary Concepts - Summary Review

- (1) Scores and variables
- (2) Frequency Tables
- (3) Frequency graphs and curves

The Measures - Recognition and calculation

- (1) Mean
- (2) Mode
- (3) Median

User: Anyone, high school or beyond, wanting to learn

How to recognize the center of a set of numerical scores

How to find the center, by calculating the mean, mode or median

What the center (or average) shows about the group of scores

What the average shows about individual scores within the group

Preparation: The preliminary portion of this program offers review of the material covered in the related MICRO POWER & LIGHT CO. program entitled

What's The Score?

PRICE:

**TITLE: PERCENT PROBLEMS**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

DESCRIPTION: A program to provide practice in the solution of the basic types of percentage problems. Special help option included. Performance report produced. Various levels of difficulty are available.

PRICE:

**TITLE: PLOT**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

DESCRIPTION: This program displays a graph of any function you choose. For comparison, one graph after another can be plotted on the same axes. The user can choose the limits of the axes. There are special provisions for graphing simultaneous equations and conic selections. On a color monitor (Apple II only), the graphs alternate among the four high-resolution colors. The teacher can use the program to demonstrate various types of graphs to an entire class, or an individual student can use it to investigate the behavior of functions or to check homework. This program comes with detailed suggestions for applications in the classroom.

PRICE: \$14.95 cassette  
\$19.95 disk

**TITLE: PLOTTING GRAPHS FOR LINE PRINTER**

ED-117



**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

**DESCRIPTION:** 3 Programs-Cartesian Plots. Semi-Logarithmic Plots. Polar Plots.

**PRICE: \$16.95**

**TITLE: PLOTTING GRAPHS FOR VIDEO DISPLAY**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

**DESCRIPTION:** 5 programs-Histograms. Cartesian Plots. Semi-Logarithmic Plots. Log-log Plots. Polar Plots.

**PRICE: \$16.95**

**TITLE: POLY MAN**

**PUBLISHERS NAME: SMART WARE**

**DESCRIPTION:** An interactive polynomial manipulation program which allows the user to specify both names and degrees for twenty polynomials or less of degree not exceeding twenty. Modes include:

- \* Addition and subtraction of polynomials
- \* Division of polynomials with remainder polynomial
- \* Multiplication of polynomials whose degrees sum to twenty or less
- \* Evaluation of polynomials at either real or complex points
- \* Differentiation and integration of polynomials; user supplies a constant of integration
- \* Real and complex root finding using a modified LinBairstow method
- \* HGR2 graphing of a selected polynomial between specified real argument limits with automatic scaling of the graph and annotation of extremes.
- \* Keyboard input of polynomials in coefficient and one polynomial's roots. Disk storage and retrieval of polynomial graphs.

Poly Man is intended for use with 48K Apple II systems with ROM Applesoft or 64K systems with Applesoft in RAM. Available in DOS 3.3 format with user's guide.

**PRICE: \$29.95**

**TITLE: PRIMARY MATH WORKSHEET**

**PUBLISHERS NAME: KLEINHAMMER BUSINESS SOFTWARE**

**DESCRIPTION:** 29 skill levels of addition and subtraction, with intro to multiplication.

**PRICE: \$70.00**

**TITLE: PROBLEM SOLVING**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Fifth graders

Introduces the student to the very simple basics of problem solving. Shows students the various ways in which a math problem can be written. Then shows how same problem would appear "in words". Shows student how, though it might seem confusing at first...it is really quite simple and shows how to change the word problem into number problem. Random problems appear at end so student can have fun, solving problems.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: PROBLEM SOLVING IN EVERYDAY MATH**

**PUBLISHERS NAME: INTERPRETIVE EDUCATION**

**DESCRIPTION:** This process oriented program takes a step-by-step

approach to analyzing practical everyday mathematical problems. It provides interactive experiences in determining the processes to be used in solving the problems.

Disk subjects: (1) how to solve problems, (2) solving addition and multiplication problems, (3) solving subtraction and division problems, (4) other problem solving processes: reasoning without numbers, estimating solutions and analyzing multiple-step problems.

**PRICE: 4 Disk Set \$165.00**

**TITLE: PROOFS & PROPERTIES**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** This program should be of real benefit to the beginning student in plane geometry. It addresses a number of basic concepts and principles normally covered early in a first year course.

**(1) Properties**

Descriptions and Examples of the transitive property, as well as the properties of substitution, addition and subtraction.

**(2) Pictures**

A number of geometric shapes and drawings which are meant to provoke a sense of recognition in the student - suggesting a particular property or definition.

**(3) Proofs**

From a large number of exercises. The student is shown a simple geometric configuration, with the "givens" and the "conclusion" to be derived, together with all the necessary intermediate steps. The student is then invited to arrange those steps into an orderly, valid proof!

**(4) Amsterdam Avuncularism**

An imaginative conceptual aid to help the student get the idea of what is involved in deriving a proof - getting from here to there, trying first one path and then another...

**PRICE:**

**TITLE: PYTHAGORAS AND THE DRAGON**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION:** Mathematics in a fantasy game context. Based on THE SWORD OF ZEDEK introduces Pythagoras as a mentor to the player. When called on for aid, Pythagoras poses math questions and depending on the speed and accuracy of response, confers secret information. With Pythagoras as an ally, the quest to overthrow RA, The Master of Evil, assumes a new dimension of complexity. Depending on the level chosen, problems range from arithmetic through plane geometry.

**PRICE: \$39.95**

**TITLE: PYTHAGOREAN PROOFS - PROPOSITION 47, BOOK I, EUCLID**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:**

**Coverage:** Proofs of the Pythagorean Theorem, by

- (1) Legendre
- (2) Bezout
- (3) Garfield
- (4) Euclid
- (5) Pythagoras
- (6) The Chinese

**Format:** Each proof consists of

- (1) The proof's history
- (2) Graphically displayed constructions
- (3) The proof itself

Note: Since certain of these proofs are a bit lengthy, you may decide to copy them on paper as you run the program. This will make it easier for you to then review the proof as a whole. The program provides the rationale for each step of each proof. To see this information merely run the program from the beginning, entering the word "solution" in place of your name (when asked for it by the program).  
**PRICE:**

**TITLE: RATIONAL FUNCTION GRAPHER**

**PUBLISHERS NAME: MATH SOFTWARE**

**DESCRIPTION:** After entering the values of a, b, c, d, e, f, g, and h, the roots, horizontal asymptotes, and vertical asymptotes are shown. The function is then graphed with the asymptotes drawn. The x and y coordinates are shown as they are graphed. This program can be used to graph linear and quadratic functions as well as more complicated rational functions. Experimentation with various functions will demonstrate the versatility of this program.

**PRICE:**

**TITLE: REVERSE**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** This program plays an educational strategy game, using a list of digits. At the beginning of the game, the digits are scrambled. The object is to get them in order through a series of moves called "reverses". The game can be surprisingly challenging; as players improve, they discover first one strategy and then an even better one--but each game remains a challenge. The sound and graphics add considerably to the fun.

**PRICE: \$14.95 cassette**

**\$19.95 disk**

**TITLE: SETS**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Fifth graders

Introduces basic concepts of sets to the students and then provides examples of not only what they are but how they are used; how they relate to math and how they relate to "real life".

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: SIMPLE MULTIPLICATION AND DIVISION**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Third graders

Student is introduced to the concepts of multiplying and dividing things, and then numbers. Simple examples are given.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: SOCCER MATH**

**PUBLISHERS NAME: COMPU-TATIONS**

**DESCRIPTION:** SOCCER MATH is a highly popular math teaching program which utilizes graphic-displayed soccer players to test for the correct answer. A choice of addition, subtraction or multiplication problems, in ten skill levels, are displayed on a soccer field screen for two players. With a correct answer, the soccer player kicks in a goal, while an incorrect answer results in a missed shot. For missed shots, the correct answer is

displayed on the screen for reinforced learning. The first player to score ten goals wins. This program includes a teacher management file to assess the current skill level of each student.

**PRICE: \$24.95**

**TITLE: SOLIDS OF REVOLUTION**

**PUBLISHERS NAME: MATH SOFTWARE**

**DESCRIPTION:** The user is allowed to choose from various objects such as triangles, squares, rectangles, hexagons, etc. and use the areas enclosed within these objects as areas to be revolved about an axis. The user can also choose whether he wants the object revolved around an axis touching the area or an axis removed a distance from this area. By using the paddle controls the object is revolved about the chosen axis and the solid of revolution is formed. The paddles adjust the speed of the rotation of the area, the color of the solid generated, and several other functions. Ideal for introducing the concept of solids of revolution for calculus classes both from the "disk" and "shell" method point of view.

**PRICE: \$15.00**

**TITLE: SPACE MOUSE**

**PUBLISHERS NAME: ZEITGEIST**

**DESCRIPTION:** A rare space mouse has been spotted in the area. To catch him, the student must operate the Mouse Trap which requires multiplication and division of fractions. To operate the trap, the student must specify an amount of bait and then solve the problem which results. The student must transfer enough bait to attract the mouse (within the teacher specified number of tries). However, the larger the amount of bait attempted, the more difficult the problem will be. Each time the mouse is captured, the student is permitted to race him through the Space Maze. By continuing to catch the mouse, the student's racing skill will be increased and the flight time reduced.

**OBJECTIVE -** To capture the mouse, and to establish a record low flight time.

**INSTRUCTIONAL GOAL -** Drill and practice in multiplication and division of fractions.

**PRICE: \$49.50**

**TITLE: SPACE SCANNER**

**PUBLISHERS NAME: ZEITGEIST**

**DESCRIPTION:** The space colony is under attack! The student's task is to operate the Battle Map which provides the warp and vector of the approaching enemy. Based on the type of attack, the student must multiply or divide to provide an "intercept". If the intercept is correct, the enemy fighter is destroyed. If incorrect, the fighter damages the student ship. After five successful enemy attacks, the student ship is destroyed. After all fighters are captured, the enemy battle star can be attacked. By continuing to destroy fighters and battle stars and to establish a record total score.

**INSTRUCTIONAL GOAL -** Drill and practice in multiplication and division of whole numbers.

**PRICE: \$49.50**

**TITLE: SPEED DRILL**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**



**DESCRIPTION:** This program provides drill on the number facts, in a format that makes it fun in either the classroom or the home. The program will drill youngsters on their number facts for any of the four arithmetic operations or for mixed operations. It will also drill algebra students on the same operations, using both positive and negative integers. The score in each game is based on the player's speed and accuracy. It's fun to play, and students like to try to improve their scores. It's an excellent aid in lower grades, and in algebra classes in high school. It's also excellent for remedial work; students enjoy the change in format from their regular work.

And yes, it is possible to score 100--but it will take you lots of practice!

**PRICE: \$14.95 cassette**

**\$19.95 disk**

**TITLE: STAT POWER**

**PUBLISHERS NAME: ABT MICROCOMPUTER SOFTWARE**

**DESCRIPTION: STATISTICS INSTRUCTOR!**

Use STAT POWER to help your students understand the fundamental concepts that may give them the most trouble:

\* Power

\* Confidence

\* Effect Size

With STAT POWER, they can gain a "feel" for the ways in which these concepts fit together to determine sample size and strength of inference.

STAT POWER follows (mostly) the organization and notation of Professor Jacob Cohen's classic work, Statistical Power Analysis for the Behavioral Sciences, published by Academic Press (New York: 1977). Since the program uses many of Cohen's formulas and a few of his tables, any sample size it computes will come very close to what you would get by using the book in the usual way.

**SAMPLE DESIGNER!**

For surveys, experiments, and whatever else may need sampling, STAT POWER can help you compute sample sizes, quickly and easily. It guides you, step by step, through an orderly process of specification, defining and requesting each element in a logical conversational sequence.

Once you have told STAT POWER all it needs to know, it displays the sample size you have requested, bracketed by sample sizes implied by neighboring values of power and effect size.

A complete run through STAT POWER takes only a few seconds, plus whatever time you may need to think and decide.

STAT POWER allows you to compute the sample sizes that many common analytical procedures require:

**T-TEST**

Estimate or compare sample means or proportions

**SIGN TEST**

Test randomness of 'coin toss' type sequences

**CORRELATION COEFF.**

Estimate or compare simple correlations

**CHI-SQUARE**

Test association in contingency tables, goodness of fit

**F-TEST**

Compare means, assess main effects and interactions

**MULTIPLE REGRESSION**

Partition variance components

**OR CORRELATION**

**PRICE: \$50.00**

**TITLE: SURFACES FOR MULTIVARIABLE CALCULUS**

**ED-122**

## PUBLISHERS NAME: CONDUIT

DESCRIPTION: Using Dr. Meyer's package, the instructor can either display images already prepared or generate additional examples using the programs provided. The four programs included in the package are described below.

Previously Drawn Graphics of Two Variable Functions

Display Surfaces. This program displays a sequence of graphs of functions  $F(X,Y,Z)=0$ . The surfaces were selected to illustrate points of relative maxima and minima, and saddle points. The graphs can also serve as a visual basis for discussing with students such topics as partial and directional derivatives. The program has two modes of operation. In the automatic mode, the program displays surfaces consecutively, allowing a brief time for viewing each image. The images are recycled repeatedly. In the manual mode of operation, the program displays images of the instructor's choice. The surfaces included are:  $Z = \cos(.06 * (X^2 + Y^2))$ ;  $Z = 5((X^2 - Y^2) / (X^2 + Y^2))^2 - 3$ ; dog saddle; bivariate normal; hyperboloid of two sheets; hyperbolic paraboloid 1; and hyperbolic paraboloid 2.

Surface Sketching demonstrates the process of sketching the graph of a function  $Z = F(X,Y)$ . The instructor can select to see curves of intersection of the surface with planes parallel to the YZ, XZ, or XY planes.

Directional Derivative. Understanding the concept of a first order partial derivative depends on recognizing an association with the ordinary first derivative. This understanding can be accomplished visually by considering the two dimensional curve of intersection of a vertical plane with the surface  $Z = F(X,Y)$ . If the plane is parallel to the YZ plane or to the XZ plane, then the slope of a line tangent to the curve of intersection is the first order partial derivative with respect to Y or X. If the vertical plane is not parallel to either of these coordinate planes, then the slope of such a tangent line represents a directional derivative.

This program displays a surface  $Z = F(X,Y)$ , a vertical plane, and the surface and plane together. At the instructor's request, the program will add the curve of the intersection to the image.

Generating Additional Images

Obviously, the surfaces included in any collection are arbitrarily chosen by the author and, therefore, any particular collection is necessarily incomplete. To compensate for this deficiency, this package includes a surface drawing program which the instructor could also use the program in the classroom to draw surfaces.

Surface Construction sketches the graph of a function of two variables, allowing the instructor (or student) to control the function, domain, number of points calculated, viewing parameters, and screen functions. The graphs are sketched with hidden lines eliminated. The speed with which the program draws the graph is such that an instructor could easily use the program in a classroom situation to demonstrate three dimensional functions.

The program produces a wire frame image of a surface  $Z = F(X,Y)$ . That is, the surface is represented by a sequence of curves of intersection of the surface  $Z = F(X,Y)$  and vertical planes  $X = \text{CONSTANT}$ , parallel to the YZ plane; or a sequence of curves of intersection of the surface with the planes  $Y = \text{CONSTANT}$ , parallel to the XZ plane.

The wire frame curves are generated in sequence, beginning with the curve closest to the viewer. As points  $(X,Y,Z)$  are calculated, they are (1) projected onto a plane, (2) tested to see whether the point should be visible or is hidden by a previously plotted portion of the surface, and (3) then plotted as visible points and line segments.

Generating a surface is typically a time consuming process of trial and error. Several decisions must be made before graphing the surface, for example:

What are the best choices for the parameters in the function?

What domain will display the most interesting parts of the surface?

What viewpoint is most effective- rho, theta, or phi?

How much perspective is desirable?

Surface Construction assists the user in resolving these questions by offering several options. The program begins by providing a menu of the options, as illustrated below:

A)  $Z = -7 * \text{EXP}(-.1 * (X * X + Y * Y))$

B)  $\text{RHO} = 30$        $\text{PHI} = 1.25$

$\text{THETA} = .4$        $D = 420$

C)  $-8 < X < 8$

D)  $-8 < Y < 8$

E) ERASE PREVIOUS IMAGE

F) SURFACE DESCRIBED BY X LEVELS

G) LINE MODE

H) NUMBER OF POINTS (X) = 17

I) NUMBER OF POINTS (Y) = 17

The surface to be plotted is identified in A. The viewing parameters are defined in B. C and D specify the domain. E and F control the manner in which the surface is displayed and H and I identify point density. The instructor can change any of the above values, view the resulting three dimensional image, and then make additional changes as often as desired.

**PRICE:**

#### **TITLE: TAYLOR'S SERIES APPROXIMATIONS**

**PUBLISHERS NAME: MATH SOFTWARE**

**DESCRIPTION:** How about a little assistance with the graphic interpretation of Taylor's series to provide a level of understanding that most of us probably never attained in graduate school? This program uses high-resolution graphics and color to demonstrate how Taylor series expansions approximate the following functions:

1.  $F(x) = \sin(x)$

2.  $F(x) = \cos(x)$

3.  $F(x) = \ln(1 + x)$

4.  $F(x) = e^x$

The function is plotted and then several Taylor Series Approximations are plotted on the same graph using different colors. Each successive plot uses more terms of the Taylor series expansion. Through this graphical display one can easily see how the Taylor series does approximate the function. Moreover, the accuracy of the approximation and the rapidity of the convergence of the Taylor series is clearly demonstrated. The program is an excellent demonstration technique for introducing Taylor's series of for reinforcing the concepts presented in the classroom.

**PRICE:**

#### **TITLE: TEDDY BEAR'S COUNTING FUN**

**PUBLISHERS NAME: HOMEWARE**

**DESCRIPTION:** Teaches elementary math and counting concepts to preschool children as they count the number of Teddy Bears appearing in each of six different scenes. Full use of Apple's Low-Resolution color graphics. Each scene displays a random number (1 to 9) of Teddy Bears and a short rhyme. A correct answer gets a "Happy Face" and a computer fanfare.



**PRICE: \$7.50**

**TITLE: THE BIG MATH ATTACK**

**PUBLISHERS NAME: T.H.E.S.I.S.**

**DESCRIPTION:** Challenging new math program...

Sharpen your skills by entering the correct answer before the equation 'lands' on your city! Provides hours of educational entertainment.

**FEATURES:**

- \* full color
- \* high resolution graphics
- \* animation
- \* sound
- \* four math functions
- \* two levels for each function

Recommended for grades 1-6.

**PRICE: \$25.00**

**TITLE: THE REAL NUMBER SYSTEM**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Rational and irrational numbers, rationalizing the denominator, inequalities, absolute values, number line graphs.

**PRICE: \$29.95**

**TITLE: THE RIEMANN INTEGRAL - FINDING THE AREA UNDER A CURVE**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** Coverage: Topics available from a Master Menu

- (1) A history of the integral
- (2) The theory of the integral
- (3) Development of the integral
- (4) Numerical techniques of approximation
- (5) Summary review quiz

**User:** The principal intended users include Calculus students about to study this topic  
Any students needing integral approximations  
Those interested in Math, seeking enrichment!

**PRICE:**

**TITLE: THE STORE THAT TEACHES**

**PUBLISHERS NAME: METACOMET SOFTWARE**

**DESCRIPTION:** With this program, the computer becomes a "cash register", which children can use to "play store". In the process, they learn basic math skills of addition, subtraction, multiplication, and how to use money.

**Two options:**

-Automatic- computer automatically displays correct answers for calculations

-Teach- user must perform calculations, the computer teaches appropriate skills when errors are made

Users input standard cash register information:

-item names, quantities, prices

-amount paid by customer

-change given to customer

-money in register at cash-in and cash-out

In "automatic mode" the computer calculates and displays:

-total cost for each item

-total cost for each sale

-change due

-total cash in register

-net proceeds



In "teach mode", the user must perform his or her own calculations in order to practice basic math skills:

- addition facts
- addition with carrying
- multiplication facts
- multiplication with carrying
- subtraction facts
- subtraction with borrowing

Teaching procedures include:

- how to set-up problems for calculation
- diagnosis for specific types of errors
- indicate which columns have errors
- a structure "walk through", showing each step of the appropriate calculations

Error report summarizes:

- skills mastered
- skills needing more practice

"User-friendly"- Simple and clear messages related to:

- sequence of procedures
- data entry
- error diagnosis
- teaching component

**PRICE: \$49.94**

**TITLE: USING A CALENDAR**

**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** A great way to teach a child introductory calendar skills!

Each lesson presents a picture of a calendar. Information and questions are scrolled below the calendar picture. Concepts include simple date/day relationships; and general interpretations. (Of course, all scrolling is under student control!)

**REGULAR FEATURES**

- Upper/lower case letters
- MODIFY

**SPECIAL FEATURES**

- CREATE - Teacher can create his/her own calendar by specifying the month and the first day. Questions may then be entered.
- REVIEW - Questions missed will be presented to the student later in the lesson.

**PRICE: \$39.95**

**TITLE: VECTOR SUM**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Allows the user to vectorially add up to 20 vectors. Graphics option displays vector addition by the polygon method. Optional display of table of X and Y components. Vectors automatically scaled to fit Hi-Res plotting grid. Goof proof entry checks implemented. A real time saver for math and physics teachers for checking homework exercises. May also be used to illustrate vector addition.

**PRICE:**

**TITLE: WHOLE NUMBERS**

**PUBLISHERS NAME: EDUCATIONAL TEACHING AIDS DIV.**

**DESCRIPTION:** (100 levels) Addition, Subtraction, Multiplication, Division, Names & Numbers, Flash Cards, Speed Math, Teacher's Guide.

**PRICE: \$95.95**

## MISCELLANEOUS

### **TITLE: 32 BASIC PROGRAMS**

#### **PUBLISHERS NAME: FLIPTRACK TRAINING TAPES**

**DESCRIPTION:** 32 Different programs will practical applications, educational uses, games and graphics. Some of the programs include: Biorhythm, Checkbook, Arithmetic, Metric, Roadrace, Obstacle, Squares, Walloons, Curve, Graph, and Birthday.

**PRICE: \$29.95**

### **TITLE: A MEMORY MYTH**

#### **PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** Provides the opportunity to both challenge and develop memory skills. Variables include image size, ordering and time. Designed for use by adults as well as children.

**PRICE: 16K, Tape \$14.95**

**32K, Disk \$19.95**

### **TITLE: ADVERTISING TECHNIQUES**

#### **PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION: COVERAGE:** The program describes four techniques:

- (1) Join the crowd
- (2) Decide for yourself
- (3) Remember me?
- (4) Act now!

**USER:** The principal intended users of this program include:

- \* Students- 5th grade and up
- \* Adults- to sharpen up

**FORMAT:** Each of the four techniques consists of:

- \* Instruction with illustrative examples
  - \* Exercises affording practice opportunities Mastery Quiz
- And a concluding mastery exercise, to determine your:
- \* Consumer Intelligence Level!

**TIME:** Each technique usually requires about 10-15 minutes.

The entire program requires about .5-1.0 hour

Start with any technique

Take them in any order

Do 1,2,...any number

**PRICE:**

### **TITLE: AROUND THE BALL PARK**

#### **PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

**DESCRIPTION:** A baseball game presentation of the material you choose. An interesting and fun way to encourage students to learn difficult material.

**PRICE:**

### **TITLE: ASTRO QUOTEC**

#### **PUBLISHERS NAME: PROGRAM DESIGN, INC.**

**HARDWARE REQUIREMENTS:** Voiced cassette recorder- not attached to computer

**DESCRIPTION:** High school to adult

Fascinating game in which you guess vocabulary words from clues and the computer takes each letter from the words and puts it where it belongs in a famous quotation. If it takes you too many tries to guess the quote, you lose the game. 3 versions: easy, start, medium, hard.

**PRICE: \$23.95**

**TITLE: AUTO ATLAS**

**PUBLISHERS NAME: CPU SOFTWARE**

**DESCRIPTION:**

- \* Points of Interest
- \* Populations- Capitols
- \* Largest Cities- Areas
- \* Individual State Maps
- \* Interstate Highways
- \* PLANS COMPLETE Cross Country Trips
- \* Gives Time and Cost Computations
- \* Educational- Informative
- \* Easy & Fun to Use

**PRICE: \$47.50**

**TITLE: BEAT THE CLOCK**

**PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

**DESCRIPTION:** An activity which adds the element of time of the responses. The objective is to increase the speed of the student's answers. The time can be set either on a question by question basis or a specific amount of time for the set of questions (either in seconds or in minutes).

**PRICE:**

**TITLE: BIOBITS I: LIFE**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** Some years ago, a mathematician invented a game, "Life", in which elements in a grid reproduce, maintain, or extinguish themselves, according to a set of formal rules. Martin Gardner (Scientific American 223: 120, 1970) described Conway's game and how to play it on a sheet of paper. A computer can act as a writing tablet, however, and allow the game to be more exciting.

LIFE DISK contains programs that play Conway's original game and also more complicated versions of it that make and modify clones. If you play the original game you should be able to infer the rules by which objects appear and disappear on the grid. If you choose the clone generator you may look at: passive growth, active growth, simple change and differentiation.

The rules for birth and extinction (or differentiation) are the same as in the Conway game, with an important exception: growth occurs at one point only in the first three modes. All objects formed in a single set of generations have the same color, distinguishing them from earlier (and later) sets.

PASSIVE GROWTH establishes a growth mode and continues from there outward. Under some circumstances objects grow back on the main clone. You can see this best if you make each set of generations small: everything has a uniform color when the sets are large.

ACTIVE GROWTH begins with a single mode but, when extinction occurs, a new mode forms. Growth points thus appear to jump over the surface of the clone.

SIMPLE CHANGE allows differentiation to occur instead of extinction some stated percent of the time. You will be asked to specify this percentage. Try different values to see the effects of changing probabilities on differentiation.

DIFFERENTIATION produces massive changes from generation to generation, after the first few generations of simple growth. The rules don't change, but lead to progressively greater expression of difference. Note how little of prior generations persists from one differentiated state to the next.

This program is intended for use in courses in General Science, Finite, Mathematics, Set Theory, Computer Science, and of course

high school and Introductory College Biology.

The Programs:

**LIFE:** This program lets you play the original Conway game of "Life". It applies a simple law to a pattern of individuals, changing their distribution by allowing reproduction or imposing extinction or both. It also complicates the rules, permitting individuals to differentiate as well as merely divide or die. The program will display changes for as many generations as you choose. You may also choose to interrupt the program between generations, in order to observe the patterns at leisure or to guess the rules of LIFE.

**SUPER LIFE:** Super life establishes a clone to your specifications, lets it grow, respond to crowding, differentiate, or come apart in fragments.

**PRICE: \$50.00**

**TITLE: CAI MANAGER**

**PUBLISHERS NAME: MATHWARE/MATH CITY**

**HARDWARE REQUIREMENTS: 5M, 10M, 20M or multiple Corvus disk drives**

**DESCRIPTION:** Allows teachers to make lesson or test assignments to the class as a whole or to individual students and to monitor quickly and easily students' progress by the use of reports and displays.

The system may be configured in a variety of ways depending on the needs of the user. Several different major subjects (math, reading, history, etc.), each with a separate set of students, lessons, and teachers, may be accommodated. Since the system allocates disk storage only when there is actually data to store, the limit on the number of students, lessons, and classes is quite vast. Most instructional software can be added to the system with only minor modifications in the program code. These modifications are described in detail in the CAI-Manager documentation.

Although one volume (the equivalent of a floppy disk) will hold the performance results for 23,000 students' lessons, results may be summarized periodically to free storage space; more compact performance reports will result. Printout options are available for all displays.

A special feature of the CAI-Manager is the Lesson Authoring Program. Using this option, any teacher (NOT A PROGRAMMER) can write lessons and tests in a variety of formats and have them assigned to students in whatever way is desirable.

**PRICE: \$1500.00**

**TITLE: CROSSWORD MAGIC**

**PUBLISHERS NAME: L & S COMPUTERWARE**

**DESCRIPTION:**

CROSSWORD MAGIC is perhaps the only educational program you will ever need. Recommended for all ages, CROSSWORD MAGIC is an entertaining way to learn many educational concepts from a wide range of subjects. Single key operation will lead you through the program even without an instruction booklet. CROSSWORD MAGIC provides hours of wholesome entertainment for all family members.

**\*GREAT TEACHING AID FOR HOME OR SCHOOL**

Improves word recognition

Increases vocabulary

Improves spelling

Develops typing skills

**\* AUTOMATICALLY INTERCONNECTS WORDS**

**\* PRINTS HARD COPY PLAYABLE VERSION**

**\* PLAY PUZZLES WITH THE COMPUTER**



High resolution graphics  
No need for box numbers  
Clues always in view  
Type directly on puzzle  
Save progress feature

\* LIFETIME DISKETTE WARRANTY

PRICE: \$49.95 + \$3 for shipping and handling

**TITLE: DISK PAK I**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** A disk packed full of assorted Applesoft programs including useful utilities, exciting games, and educational tutorials.

**PRICE:**

**TITLE: EDUCATORS DISK SPECIAL**

**PUBLISHERS NAME: TECK ASSOCIATES**

**DESCRIPTION:** A group of 14 programs on one disk.

**INCLUDED ARE:**

**SCRAMBLE** - presents a scrambled word for the user to unscramble. The user may choose between versions which are timed or not timed. The program is documented with remark statements for changing or sorting the word list. Color graphics add to the fun. (Integer BASIC)

**LEGACY** - appears to be a mystery game but it is really a multiplication drill. Once understood, the game then becomes an enjoyable form of timed drill on multiplication facts. (Applesoft)

**TAKE IT** - a drill-game on addition, subtraction, multiplication, and division of positive and negative integers. Input is timed with the student competing against the computer. If the student "wins", the difficulty is increased. If the student "loses", the contest becomes easier. (Applesoft)

**BAGELS** - a number guessing game. Students learn to draw inferences from clues and develop problem-solving strategies. (Integer BASIC)

**CLOCKS** - a time-guessing game. Students develop problem-solving strategies, learn to draw inferences from clues, and become more proficient with units of time. (Integer BASIC)

**TWENTY QUESTIONS** - a number guessing game which teaches the use of less than and greater than symbols, problem solving and binary search strategies. (Integer BASIC)

**SQ. BINOMIALS** - a drill on squaring binomials. The user selects the number of problems and the score is given at the end. (Integer BASIC)

**SLOPE** - provides practice for slope and intersect concepts using linear equations. Subroutines are included to allow decimal input and output with InterBASIC. (Integer BASIC)

**ALCOHOL** - a program which determines the physiological effects of alcohol on the body based on information supplied by the user concerning body weight, kind of "booze", number of drinks, and hours spent drinking. (Applesoft)

**KEYS** - a seemingly simple program which is fascinating for young children. It increases recognition of letters and numbers using Apple color graphics. (Integer BASIC)

**BIRTHDAY** - sings "Happy Birthday" using color, large print, and sound. BIRTHDAY makes a perfect birthday present -- along with an Apple II to run it on, of course. (Integer BASIC)

**MESSAGES** - uses Apple's color graphics to display messages in large print. This is useful for displays and demonstrations. The subroutines may be used with other programs. (Integer BASIC)

**FANCY FROGS** - a clever program which makes excellent use of Apple

color graphics to develop logic, foresight and problem-solving strategies. (Integer BASIC)  
COIN TOSSING - simulates tossing a coin and demonstrates elementary principles of probability. (Integer BASIC)  
**PRICE: \$19.95**

**TITLE: GRAPPLING**

**PUBLISHERS NAME: SPORT TECH**

**DESCRIPTION:** GRAPPLING simplifies High School Wrestling Tournament scoring. What has been a cumbersome and error ridden job is now reduced to simply entering win/lose data on the Apple keyboard as the matches occur. The Apple does the rest. GRAPPLING keeps track of the winner of each match, how the winning wrestler won, the round, the weight class and accumulated team points.

GRAPPLING ranks the teams and provides a comprehensive printout of all results in an easy to read and understand format. GRAPPLING was written by a High School wrestler who understands the problems involved in tournament wrestling scoring.

At the surprisingly low price of \$39.95, no High School wrestling coach or team manager can afford to be without GRAPPLING.

**PRICE: \$39.95**

**TITLE: ICAN**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** The idea for this program package grew out of the author's experience in social work- helping people cope with the stresses that come packaged with that everyday experience called living!

The program has one basic purpose- to promote an awareness of the kinds of options available to all of us, as we try to better manage stress in our lives.

ICAN invites the user to think of stressful situations, to make an estimate of the intensity of stress felt, and then to consider the helpful insights contained in certain thought-provoking ideas related to such situations.

These useful concepts are associated with over 70 emotion-charged keywords, each of which is in turn associated with an anticipated level of stress- low, moderate or high.

The total ICAN package consists of four programs, which treat these variables as follows:

**KEYWORDS.** This program enables the user to display the keywords predefined in the ICAN package.

**CONCEPTS.** This program makes it possible to display the helpful ideas associated with a particular keyword and level of stress.

**KEYWORD SUGGESTIONS.** This program identifies keywords with stress levels and points the user to concepts which may prove helpful.

**CONCEPT SUGGESTIONS.** This program associates concepts with stress levels, (completing the set of associations).

Although the author and Micro Power & Light Co. believe that this program is well conceived, no warranties are expressed or implied as to its performance or fitness for a particular purpose or individual.

**PRICE:**

**TITLE: MATH STRATEGY AND SPELLING STRATEGY**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Math Strategy and Spelling Strategy are two innovative programs that teach youngsters how to use the mind's eye to sharpen math and spelling skills. Incorporating the

latest developments in Neuro-Linguistic Programming (NLP), the self-paced programs utilize interplay between eye movement and memory. The two programs are ordered and sold separately.  
**PRICE: \$45.00**

**TITLE: MIND-MEMORY IMPROVEMENT COURSE-STEP 1**

**PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

**DESCRIPTION:** 10 programs using techniques learned in Step 1 to improve listening skills, study skills, and ability to memorize names with faces. Includes audio cassette and vinyl storage binder. Does not require the Individual Study Center.

**PRICE: \$26.50 Cassette**

**\$31.50 Diskette**

**TITLE: MIND-MEMORY IMPROVEMENT COURSE-STEP 2**

**PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

**DESCRIPTION:** 9 programs using techniques learned in Step 1 to improve listening skills, study skills, and ability to memorize names with faces. Includes audio cassette and vinyl storage binder. Does not require the Individual Study Center.

**PRICE: \$31.50 Cassette**

**\$36.50 Diskette**

**TITLE: MOPTOWN**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Moptown is a collection of entertaining and interesting logic games for children aged four and up. Self-paced learning of reasoning skills is reinforced through the use of sound and colorful "Moppet" characters. Opportunities to improve skills are unlimited as the program generates new problems to solve with each new game.

**PRICE: \$50.00**

**TITLE: NOVELTIES**

**PUBLISHERS NAME: COMPU-TATIONS**

**DESCRIPTION:** Includes four entertaining programs oriented to stimulating utilization of the computer by students:

**BLOCK LETTERS:** Type a string and see it projected in colorful block letters.

**SIGN:** Run a repeated lo-res block lettered sign with as many messages as you desire.

**CODE:** Encodes and decode messages in any of 25 possible "code wheel" combinations. A friend can decode messages without a computer by using a wheel or chart.

**MYSTERY OUIJA:** Answers questions and tells the future after weird hi-res moire pattern display.

**PRICE: \$14.95**

**TITLE: PUZZLER**

**PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

**DESCRIPTION:** A crossword type game which allows the student to fill in a puzzle while answering the questions.

**PRICE:**

**TITLE: QUICK & EASY DATA MASTER**

**PUBLISHERS NAME: ADVANCED SOFTWARE TECHNOLOGY, INC.**

**DESCRIPTION:**

**AN UNFORGETTABLE EXPERIENCE IN DATA MANAGEMENT**

**ED-132**

#### QUICK:

- \* Entry and access to all the data that your computer will ever store.
- \* The Data Base is written in unprotected basic so it can be quickly and easily modified.
- \* Hard Disk compatible with no changes.
- \* Quick search by multiple fields using separate ranges.
- \* No limit on the maximum number of records except disk space.
- \* Sorting is performed as data is entered.
- \* Simultaneous access and data transfer to multiple files.
- \* Use wild cards to search with.
- \* Over 100 math calculations possible per data base.

#### EASY:

Design & setup of your application with very sophisticated custom specifications.

- \* A/R Aging Report
- \* Inventory Re-Order Point
- \* Inventory Status
- \* A/P Cash Requirement Report
- \* Weekly Sales Log
- \* Salesman Commission Report
- \* Appointment Schedules
- \* G/L Trial Balance
- \* Customer Account List
- \* General Ledger
- \* Accounts Receivable
- \* Chart of Accounts
- \* Library Management
- \* Customer List
- \* Personnel/Client Files
- \* Grade Computations
- \* Restaurant Control Pkg
- \* Inventory
- \* Insurance Brokerage Pkg
- \* Medical Billing
- \* and many more .....

#### SPECIFICATIONS PER DATA FILE:

Maximum Field Size: 245  
Maximum Fields: 200  
Maximum Calculations: 200  
Maximum Record Size: 3,000  
Typical Access Time Under 5 Seconds!

**PRICE: \$69.50**

#### **TITLE: QUIZ MASTER - MOVIE TRIVIA & COMPUTER TERMINOLOGY** **PUBLISHERS NAME: LAZER SYSTEMS**

**DESCRIPTION:** Quiz Master is a series of multiple choice question answer diskettes on selected subjects. Each diskette is full and has approximately 1000 questions on the specified subject. The first two subjects are Movie trivia and Computer terminology. The program that accesses the massive text file containing the questions and answers is designed so that you WILL learn about the subject. This is accomplished by requiring you to try another answer, if you miss a question, until you set it right. This way, you will know the correct answer before you continue on to the next question.

The operation of the program is very simple. First you are asked which question you would like to start with. When the question session starts, the number of correct and wrong answers is



continuously displayed along with the percentage. This way you will always know how well you are doing. When you are tired and wish to end the session, you will be given the option to review the questions that you missed.

This system has been found to be a quick and easy way to learn about the subject matter.

Future offerings may be Star Trek, History, Science and a multitude of other topics.

**PRICE: \$12.95**

**TITLE: SCIENTIFIC & GAMES**

**PUBLISHERS NAME: AMERICAN SOFTWARE & SYSTEMS**

**DESCRIPTION:** Conversions, Mathematics, hydraulic calculations, bar graph presentation of data games and others.

**PRICE: \$39.95**

**TITLE: SUBJECT DATA TAPES/FILES**

**PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

**DESCRIPTION:** At least 80 questions and answers for each tape/file to go with the 6 activities in the Individual Study Center.

**PRICE: \$5.95**

**TITLE: THE MOSTLY BASIC EDUCATIONAL PROGRAM PACKAGE**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

**DESCRIPTION:** Contains 7 programs designed to entertain and educate.

The DUNGEON OF HTAM is an amusing math game that inspires children to do well on math problems by offering them "gold" for correct answers. Players try to work their way out of a dungeon guarded by monsters who offer math problems. The monsters award gold for correct answers but take away gold for incorrect answers. Players start the game with 1,000 pieces of gold, and if they lose all of them, they lose the game. After finding their way out of the dungeon, players are rewarded with a display showing the number of gold pieces acquired, the number of questions answered correctly, and the number of turns taken. A game rating judging overall performance is given.

Another intriguing math game is MATH 4. It offers 4 different 10-question math tests in 3 levels of difficulty. The program gives random problems in addition, subtraction, multiplication and division, with no two tests being alike. the program tells if the problem was answered correctly or incorrectly, and if incorrect, the user has another chance to provide the correct response. After all 10 questions are answered, the score is given.

The SPELLING TEST is similar to MATH 4 in that it give the user a second chance to come up with the correct answer before moving on to the next question. The incorrect spelling of the word is displayed and the student must spell the word correctly. After each try, the computer notes whether the answer was correct or not. Test words can be the ones supplied by the program, or the user can enter a new list. After each test, the total number of correct answers along with the corresponding percentage is displayed. Both programs offer the correct answer if two tries are successful.

A program designed to increase a reader's speed is also included in this package. The READING PACER displays one line of text in the middle of the screen from approximately 0.3 to 3 seconds. The reader can choose his own speed, with the slowest being 1 and the quickest being 10. The program will display text up to 1,200 words per minute. by gradually increasing the speed, and

changing the text on a regular basis, the user should see an increase in reading speed and comprehension.

Learning French, German, Italian and Spanish is also possible on the microcomputer using the LANGUAGE FLASH CARD program. There are 25 flash cards available for each language and there are 3 speed variables. The user chooses the language and the speed, and whether he wants the foreign or the English word given. The program tells the user if the answer was correct, and if incorrect, it gives the correct response. After the 25 cards are given, the number correct and corresponding percentage are shown. A program which tests visual capabilities is also included. The VISUAL PERCEPTION TEST has three levels of difficulty from which the user can choose. One of five signs is shown on the screen at random locations. The length of time it remains displayed depends upon the level chosen. The user has 25 tries to enter the number that corresponds with the symbol. The game can be ended after 25 tries, the level changed, or the game can continue as is. If the game is ended, the percent score and the average score are given.

The MEMORY CHALLENGE provides another means of judging the user's recall ability. Numbers of random lengths are displayed and the object of the game is for the user to repeat the number. There are three levels of difficulty.

**PRICE: \$29.95**

**TITLE: THE RESPONSIBILITY LIFE DYNAMIC**  
**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Deals with discovering what it means to come from a context of responsibility. The major games are: Speedway (responsible driving or crash!), Bean Reaction (after eating beans, you react to each other's "bean reactions" with clubs--for 2 players), Ring The Bell (carnival type), Animal Bingo (50 animals on a 96-square board, 10 different types--line up 5 for BINGO; marvelous strategies possible!). All hi-res, shape table, includes game vocabulary card.

**PRICE: \$15.95**

**TITLE: THE SHELL GAMES**  
**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:**

**THE ANIMATED APPLE**

The intriguing story of how APPLE grew from a tiny flower...See it all in this engrossing cartoon.

**MATCH MACHINE**

The Magnificent Match machine displays two columns of words that match. One of the columns is scrambled. Your job is to straighten them out. When you have matched every match, make up your own list on any subject. The Match Machine will help you make them a permanent part of the program.

**PROFESSOR TRUE**

A true/false quiz at its finest. Professor True will ask you interesting questions and then tell you something more about it. For example: The most famous naval battle of the Civil War was between the Monitor and the Virginia. True or False? When you've mastered what the professor has to offer, create your own quizzes; the Shell Games editor makes it fun and easy.

**MR. MULTIPLE**

When did the first nuclear reactor go critical? Who played the dog on TV's Cosmo Topper? How should you dress for 15 degrees Celsius? If the answers to these burning questions are keeping you awake nights, Mr. Multiple is for you. And if you know all the answers, how about making up some

questions, using the built-in Shell Games Editor.  
THE SHELL GAMES is packaged to include a manual and a program  
diskette.  
**PRICE: \$29.95**

## MUSIC

**TITLE: ARNOLD****PUBLISHERS NAME: RAINBOW COMPUTING****HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Tone recognition and melodic memory skills are taught. "Arnold" has five levels of skill difficulty which provide patterns easy enough for the beginner and difficult enough for the best of music ears! These patterns are taken from 95 graded melodies. By using solfeggio syllables or scale degree numbers, "Arnold" asks you to recall and enter the tones of an ever increasing melody.

**PRICE: \$190.00****TITLE: AUTO DIGISONG PLAYER****PUBLISHERS NAME: RAINBOW COMPUTING****HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Enables preprogramming of tempo, timbre, and other musical parameters for fully automated performances of compositions. May use for a "recital" of students' Music Composer compositions.

**PRICE: \$45.00****TITLE: BASIC EAR- TRAINING SKILLS****PUBLISHERS NAME: ALF PRODUCTS**

**DESCRIPTION:** A four program set for Music CARD MC16 owners. Students learn to discriminate between two different pitches with **PITCHES**. **INTERVALS** helps the student recognize melodic or harmonic intervals. Students learn to identify Major, Augmented, Diminished, and Minor chords with **CHORDS**. **SCALES** helps the student identify Major, Natural Minor, Melodic Minor, Whole Tone, Harmonic Minor, and Chromatic scales.

**PRICE: \$49.95****TITLE: CHORD MANIA****PUBLISHERS NAME: MICRO MUSIC, INC.****HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Practice of chords including recognition of four-voice chords in any combination of chord qualities (all triads and five different seventh chords) and inversions is this program's design.

**PRICE: \$190.00****TITLE: DOREMI****PUBLISHERS NAME: MICRO MUSIC, INC.****HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Students are taught to identify (by sound only) the individual degrees of a major scale using scale degree or solfeggio responses. Recommended for beginning ear training skills.

**PRICE: \$100.00****TITLE: ENVELOPE CONSTRUCTION****PUBLISHERS NAME: MICRO MUSIC, INC.****HARDWARE REQUIREMENTS: MIS DAC Board**

**DESCRIPTION:** Design and construction of musical timbres by plotting the envelope of each harmonic in a sound is allowed. The envelope of each harmonic is displayed as a 3-D graph. The exciting capability of manipulating all three dimension



simultaneously (time, amplitude, and harmonic content) that go into creating synthesized sound is provided in this program. The program may be used alone for experimenting with the construction of music instrument sounds, or it may be used to produce instrument sound for MMI's ENVELOPE SHAPER program. An ideal learning tool for understanding music acoustics and timbre.  
**PRICE: \$175.00**

**TITLE: ENVELOPE SHAPER**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Designed for the orchestration of music composed or arranged with MUSIC COMPOSER. Various instrument sounds, tempo changes, pitch and octave transposition repetitions of any section of the music, and the addition of codes is offered in this selection. New enveloping techniques provided include many realistic timbres- bass, winds, plucked string, and others. One of four stereo channels (if two MMI DAC Boards are used together) can be specified and altered for any of the four voices. Controls provided with Shaper can be changed at any time during the music performance .

**PRICE: \$100.00**

**TITLE: EXPERIMENTER'S PACKAGE**

**PUBLISHERS NAME: MICRO MUSIC, INC.**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** The educator or musician is provided access to the machine language interpreter that produces MMI musical sound and graphics. It allows the programmer/teacher to tailor tutorial programs to the specific needs of his or her students. Designed for advanced programming applications.

**PRICE: \$230.00**

**TITLE: FIND THE KEY**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** Beginning music students learn piano notes by matching keys with their letter names. Students learn easily with this no-fail exercise.

**PRICE: \$15.00**

**TITLE: HARMONY DRILLS: SET 1**

**PUBLISHERS NAME: MICRO MUSIC, INC.**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Published by Wm. C. Brown Co., TECHNIQUE FOR LISTENING, Renward's textbook, is a comprehensive supplement to accompany a selection of harmony drills.

**PRICE: \$110.00**

**TITLE: INTERVAL MANIA**

**PUBLISHERS NAME: MICRO MUSIC, INC.**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** The program is designed for practice of melodic and harmonic intervals with any combination of interval sizes and qualities (major, minor, diminished, augmented, and perfect), and practice in bass or treble clefs or the full great staff.

**PRICE: \$190.00**

**TITLE: KEY SIGNATURE DRILLS**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Drill in recognition and identification of major and minor key signatures is presented in this series of programs. Included is a key signature game.

**PRICE: \$110.00**

**TITLE: MAKE A TUNE**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** You don't need to know music to create tunes. The program creates a tune from the player's notes of high, low notes, fast or slow tempos. The player sees a "light show" during the playing of the tune.

**PRICE: \$15.00**

**TITLE: MARCHING BAND DATABASE**

**PUBLISHERS NAME: APPARAT, INC.**

**DESCRIPTION:** Two separate programs for information control. One keeps track of marching band members and their assigned uniform numbers, hat numbers, grade, instrument, section, and bus numbers. The other keeps track of instruments and equipment within the department. This program can be used for 'at home' inventory and travel inventories. Both programs have sort, scan, search, and print routines.

**PRICE: \$40.00**

**TITLE: MELODIOUS DICTATOR**

**PUBLISHERS NAME: MICRO MUSIC, INC.**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Teaches students to hear single line melodies and to notate these melodies on a traditional treble clef staff. The student interacts with the computer, first listening to a melody, and then notating the pitches on the staff using a graphic representation of a keyboard. Two note pattern based upon major and minor seconds and increases in difficulty to seven note patterns utilizing all harmonic intervals within the octave is how the MELODIOUS DICTATOR begins.

**PRICE: \$190.00**

**TITLE: MICRO MUSIC DIGISONG PAKS**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Representative examples of American musical culture, preprogrammed by MMI.(Maybe used as examples for students doing arrangements.) Available disks: Red Hot Bach, Disco Rock & Jazz, Oldies but Goodies, Hymn Favorites, Dixieland Swingers, Christmas Wonderland.

**PRICE: \$30.00**

**TITLE: MODE DRILLS**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** A series of programs for visual and aural drill in recognition and identification of minor, church, and major modes.

**PRICE: \$110.00**

**TITLE: MUSIC COMPOSER**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** A music system providing complete compositional and performance control of up to four musical voices. Apple II compatible. Music Composer will:

- \* COMPOSE one, two, three or four voices simultaneously.
- \* PLAY up to four voices simultaneously.
- \* DISPLAY all voices while the music is playing.
- \* ENTER music noted through a fast, simple and well tested coding system or through an optional "GRAPHIC ENTRY" approach.
- \* BUILD timbres through Fourier construction
- \* EDIT your own or existing compositions.
- \* SAVE your music on a disk.
- \* HEAR music through the Micro Music DAC card. Incorporated right on the card is the amplifier.

**PRICE: \$175.00**

**TITLE: MUSIC IN THEORY AND PRACTICE**

**PUBLISHERS NAME: MICRO MUSIC, INC.**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** MUSIC IN THEORY AND PRACTICE (2nd edition), by Bruce Benward, published by Wm. C. Brown Co., is a comprehensive (13 disk) supplement of some 70 assignments to the nationally recognized text. (Micro Music programs are offered as supplements to the existing text through permission of the publisher.)

**PRICE: \$500.00**

**TITLE: MUSICAL STAFF DRILL**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** Correlating piano keys and notes is easy with this timed no-fail exercise. A player matches a piano key with a note of the staff by moving a ball with a graphic display of a piano keyboard and grand staff.

**PRICE: \$20.00**

**TITLE: MUSICMASTER**

**PUBLISHERS NAME: SYNTAURI**

**HARDWARE REQUIREMENTS:** The alphaSyntauri instrument system (61- or 49- note AGO keyboard, interface, software and two foot pedals), audio processing hardware (the MusicSystem), and an audio system (all components may be purchased separately).

**DESCRIPTION:** MusicMaster is a series of interactive, exciting programs designed to meet the need for Effective, Comprehensive, Low Cost training in basic musicianship.

Musicmaster is a unique teaching assistant which lets students set their own pace to effectively master ear training and introductory theory topics.

Combined with the alphaSyntauri intelligent instrument (keyboard, software, and microcomputer system), MusicMaster is a versatile

- teaching aid
- performance instrument
- combination tool
- programmable synthesizer

Every MusicMaster provides

- quick interaction and easily followed menus
- a wide array of problem types for in-depth learning
- student record-keeping and performance analysis
- a teacher management system
- comprehensive manuals and friendly tutorials
- an effective learning experience

## Curriculum

MusicMaster is available in modules corresponding to a natural learning sequence for basic theory and ear training.

### Beginner Module

Music fundamentals, which can be mastered using interactive drill and practice exercises, include:

#### Scales

- introduction to major, natural minor, harmonic minor and melodic minor scales

- recognizing scales by sound alone

- playing scaled from notation

- playing scales from memory

#### Intervals

- recognizing simple, diatonic intervals (varying roots) by sound

- identifying intervals by playing them at the keyboard

#### Triads

- recognizing the major, minor, augmented and diminished triads by sound

- playing triads at the keyboard

- identifying triads from notation

### Intermediate and Advanced Modules

Intermediate and advanced modules will cover

- rhythmic dictation

- harmonic progression

- chords

- melodic dictation

- counterpoint

- modulation

MusicMaster's authors, Drs. Wolfgang Kuhn (Stanford Univ.) and Paul Lorton (Univ. of San Francisco) have pioneered using computers in music education. The instructional techniques they employed were developed during a decade of music teaching and curriculum design. The programs in MusicMaster have been extensively tested in many educational institutions which have alphaSyntauri music labs. Student levels have ranged from elementary to post-graduate.

### MusicMaster features:

**Student Scoring and Feedback:** A student receives immediate feedback on each problem and, at the end of each session, is given an overall score (the number of correct responses out of the number of first tries).

**Teacher Management System:** Programs are included to assist in class administration, curriculum management, setting security codes, student enrollment and record keeping. For each student, scores are maintained by topic (strand) and for the last strand in the latest session: teachers may access a student's progress to evaluate performance. In addition, file formats are available so that custom record-keeping and analysis programs may be written.

**Manuals:** Teacher manuals cover all aspects of MusicMaster use and course administration. Student manuals contain easily used tutorials for using each MusicMaster module.

**Default Settings:** To speed up the learning process and permit concentration on selected problems, MusicMaster allows instructors and students to set the speed of each problem and choose ascending/descending or mixed problems, arpeggiated or simultaneous presentation of aural problems, and notational display on/off.

### The Syntauri Instrument System

The Syntauri system provides students a tool for learning which is flexible, exciting, and easily used. Designed for the alphaSyntauri digital synthesizer, MusicMaster combines learning



on a keyboard instrument with state-of-the-art music technology in a package which meets budget objectives.

Syntauri uses software- not expensive hardware- to bring you dynamic, expressive instruments at a low cost. With the alphaSyntauri synthesizer, students and educators can have a musical tool for

- solo and ensemble performance
- composing and orchestrating
- designing and exploring new sounds
- single and multipart recording
- scoring

**PRICE:**

**MusicSystem** is a trademark of Mountain Computer Inc.

**TITLE: MUSICTUTOR**

**PUBLISHERS NAME: PASSPORT DESIGNS, INC.**

**DESCRIPTION:** MusicTutor is a CAI software module written by Dr. Charles Roody of the University of Minnesota. MusicTutor is an effective, easy to use learning tool, both in the classroom and at home.

The four training units-Intervals, Matching & Tuning, Chords, and Melodic Games - were designed to develop a number of aural skills and introduce general music concepts and principles. Well-rounded skills are encouraged by a variety of drills which students can follow at their own pace. A set of displays associated with each training unit provides instruction, encouragement and progressive feedback, scores, and active drill parameters. The same programs can be used by professional musicians to sharpen and improve existing skills.

In the classroom, MusicTutor is an ideal cost-effective supplement to any music education program. A valuable teacher's aide, MusicTutor easily guides students through the most repetitious and tedious of drills, freeing the teacher for more personalized interaction with his or her class. Included in the software is a Teacher's Disk, which lets instructors set up drills to correspond with the skill level of their class, or to concentrate on a particular subject area.

MusicTutor's visual presentation of materials reinforces the relationship between "what is seen" and "what is heard", providing the training necessary for a firm background in music fundamentals.

**PRICE:**

**TITLE: NOTES**

**PUBLISHERS NAME: MERRY BEE COMMUNICATIONS**

**DESCRIPTION:** Music reading drill - ages 6+. Developed by experts in education and instructional design. Field tested by subject area specialists.

**PRICE: \$19.95**

**TITLE: PIANO KEYBOARD DRILL**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** You don't need to know music to create tunes. The program creates a tune from the player's notes of high or low notes, fast or slow tempos.

Beginning music students learn piano notes by matching keys with their letter names. Students learn easily with this exercise. A player matches a piano key with a note of the staff by moving an electronic ball with a graphic display of a piano keyboard and grand staff.

**PRICE: \$39.50**

**TITLE: PITCH DRILLS WITH ACCIDENTALS**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Drill of the names of the lines and spaces for treble and bass clefs with accidentals added are included in this series of programs. The program also includes a pitch game and exercises in pitch transposition.

**PRICE: \$110.00**

**TITLE: PITCH DRILLS WITHOUT ACCIDENTALS**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Names of the lines and spaces in the treble and bass clefs are included in this series of programs for visual drill. Also included is a pitch game and exercises in pitch transposition.

**PRICE: \$110.00**

**TITLE: PROCESS & OTHER PROGRAMS**

**PUBLISHERS NAME: ALF PRODUCTS**

**DESCRIPTION:** This is a set of 6 programs for Music Card MC16 and MC1 owners. TEMPO is used to change a disk of songs to Timing Mode or Paddle Mode, HUSTLE is used to easily construct a DISCO-compatible album file of songs to be played. ENVELOPE is used to design and experiment with envelopes; the loudness contour is displayed in Hi-Res graphics real-time during playback of a simple user-definable melody. ENTRY-created songs are listed by MLIST in alphanumeric format. PROCESS is used to make large-scale changes in ENTRY-created songs including appending songs and moving parts and subroutines within a song. FLASH is used from a BASIC program to play back ENTRY-created songs along with a low resolution color display.

**PRICE: \$49.95**

**TITLE: RHYTHMIC DICTATOR**

**PUBLISHERS NAME: MICRO MUSIC, INC.**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** Student is taught to hear basic rhythmic patterns and to notate these patterns on a one-line rhythmic staff. The program systematically sequences through rhythmic phrases which increasingly stress syncopation and rest values.

**PRICE: \$190.00**

**TITLE: SIR WILLIAM WRONG NOTE**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: MMI DAC Board**

**DESCRIPTION:** This comprehensive program allows one to practice pitch error-detection within any combination of four-voiced chord types, from minor or major sevenths and augmented-sixth chords at user's option. "Sir William" presents the visual notation of the chord, and then sounds the chord with one note incorrectly, once the chord type is selected. The task is to identify the incorrectly sounded voice, and the actual pitch sounded by the note. "Wrong" and "correct" soundings of each chord are provided for external comparison, and a "grade card" review of each student's use of the program is incorporated.

**PRICE: \$190.00**

## SCIENCE

**TITLE: ADVANCED PHYSICS****PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Demonstrates Fourier series, the Millikan oil drop experiment, and three body motion. The Fourier series demonstration allows the instructor to synthesize various waveforms (square, sawtooth, etc.) using a variable number of Fourier components. Complete spectra of the waveforms can be displayed.

**PRICE:** With manual \$65.00

**TITLE: ALMANAC****PUBLISHERS NAME: COMPUTING CONCEPTS**

**DESCRIPTION:** A new Apple II program with functions related to time, the calendar and general astronomy, should interest those involved in time calculations-general users, businessmen, amateur astronomers, shortwave radio listeners and time travelers. Functions include:

- \* Calendar calculations that include printing calendar pages for any month specified-even prior to the Gregorian calendar calculation of date of Easter.
- \* Sidereal time, including a software sidereal clock for calculating star time.
- \* Sunrise and sunset calculations.
- \* Calculation of phases of the moon and the dates and times of solar and lunar eclipses.
- \* Solar system model showing the relative positions of the planets for any date and illustrating the rotation of the planets around the sun, while displaying the time in hundredths of a year.
- \* A real-time clock that shows the time in time zones around the world.

**PRICE:** \$29.95

**TITLE: ANATOMY QUIZ****PUBLISHERS NAME: PROFESSIONAL COMPUTER SYSTEMS**

**DESCRIPTION:** Formulates questions as it goes, giving you literally thousands of different questions in anatomy. The quiz consists of Multiple Choice, Multiple-Multiple choice, and Matching. It is available in 7 volumes:

- \* Muscles of the Head & Neck
- \* Muscles of the trunk
- \* Muscles of the Extremities
- \* Joints
- \* Nerves
- \* Arteries
- \* Veins

**PRICE:** \$19.95

**TITLE: ASTRONOMY****PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

**DESCRIPTION:** New Edition. This disk contains programs designed to introduce you to Stars and Constellations. There are more than 24 Constellations displayed in graphics for study. The celestial coordinates of right ascension and declination are introduced as we display the Zodiac Constellations. The annual motion of the sun through the Zodiac is presented. A quiz is provided as well.

Some of the studies are:

- \* Types of stars

- \* Myths about some constellations
- \* Nightly progression of stars
- \* Identification of constellations
- \* Meteors and satellites
- \* Celestial coordinated
- \* Zodiac constellations & the annual apparent motion to the sun.
- \* The vernal equinox and the ecliptic

**PRICE: \$32.00**

**TITLE: ASTRONOMY 1- INTRODUCTION TO STARS**

**PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

**DESCRIPTION:** Intended for those interested in starting the study of astronomy. Some constellations and stars are shown with information about what can be seen in the night sky.

- \* The Big Dipper and Polaris
- \* Orion- the hunter
- \* Information about stars
- \* Right ascension- Declination
- \* Motion of the Sun among the stars
- \* Meteors and satellites.

**PRICE: \$32.00**

**TITLE: AVICULTURIST I**

**PUBLISHERS NAME: AMERICAN AVICULTURAL ART & SCIENCE, INC.**

**DESCRIPTION:** Zebra Finch Genetics & Zebra Finch color distribution chart.

**PRICE: \$15.00**

**TITLE: AVICULTURIST II**

**PUBLISHERS NAME: AMERICAN AVICULTURAL ART & SCIENCE, INC.**

**HARDWARE REQUIREMENTS: Controller card**

**DESCRIPTION:** Bird classification program- find bird by 3 known characteristics from 1000 bird data file.

**PRICE: \$35.00**

**TITLE: AVICULTURIST IV**

**PUBLISHERS NAME: AMERICAN AVICULTURAL ART & SCIENCE, INC.**

**DESCRIPTION:** Moment of inertia and element of triangle calculation.

**PRICE: \$40.00**

**TITLE: AVICULTURIST: LIQUID & GAS FLOW CALCULATION**

**PUBLISHERS NAME: AMERICAN AVICULTURAL ART & SCIENCE, INC.**

**DESCRIPTION:** Menu driven flow calculation programs, to find physical properties on flow of gases or liquid for tube data engineering.

Two main programs calculate quantity, inlet pressure, outlet pressure, flow coefficient, specific gravity, temperature, selected tubing material's outer diameter's allowable wall thickness. This also includes tube volume calculation program.

The program also considers the elevated temperature in high-pressure condition of unknown medium, in which utilizing several sophisticated exponential calculation routines to find ultimate pressure ratings of both tubing and medium simultaneously.

Commonly used industrial tubing data (aluminum, copper, carbon steel and 2 kinds of stainless steel) are stored in data file.

Each and every program are useful tools for students, scientists, flow engineers, and other physics minded programmers.

Programmed data is based on specific gravity of water and air in



normal 70 degree F temperature and use inch-lbs system, so some users may convert to metrics to suit mechanical requirements. All programs utilize touch-key selection system, to make easy for the non-programmer, which eliminates use of the return key, but still recognized symbols or abbreviations of know elements to find its formula then provide missing variables. Instructions contain list of commonly used industrial materials.  
**PRICE: \$40.00**

**TITLE: BALANCING MOLECULES**  
**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** High Resolution text is used to generate questions on balancing molecules. The molecular name is given and the student is prompted for the balanced formula. Extensive diagnosis of errors is given. two versions are provided; one for practice, one for quiz. The quiz results are recorded on disk with diagnostics.  
**PRICE: \$40.00**

**TITLE: BASIC ELECTRICITY**  
**PUBLISHERS NAME: PROGRAMS FOR LEARNING**

**DESCRIPTION:** a set of three programs, SERIES, PARALLEL, NETWORK, which provide practice in calculating current, voltage and resistance in D.C. circuits.  
Package FLA-1 Three programs with instructor's guide  
**PRICE: \$50.00**

**TITLE: PICBITS II: MAGIC**  
**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** T.P. Roos' striking visual displays make learning the basics of scientific method a delight. Magic Flag illustrates the difficult concepts of entropy and randomness by showing how patterns destroy themselves when forced to change in accordance with their environment. It makes no difference whether the original pattern is random or ordered, its eventual fate is uniformity.  
This package may be used in Finite Mathematics, Elementary Physics, Introductory College and High School Biology, Genetics, and Evolution.  
The Magic Flag changes its spots, depending on their color or the color of their neighbors. You may start with a randomly spotted flag or with a recognizable, national flag. Left to its own devices, The Magic Flag will have 64 spots with five different colors. At your choice it can have up to 1444 spots with 15 colors; the colors may occur with equal probability or with probabilities you select.  
With each wave of the flag every spot is compared with the spots above, below, and on either side. At random its color is either changed to that of one of its neighbors, or if you permit it, kept unchanged. Eventually one of two things will happen; either the flag will have only one color or will assume a regularly changing checkerboard.  
**PRICE: \$25.00**

**TITLE: PICBITS III: GROWTH**  
**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** Teach growth in populations and organisms using computer models to encourage your students to discover important facts about the relation between environment and size change in populations or organs. The model's graphics illustrate

differences between logarithmic and arithmetic solutions.

This material is intended for use in Introductory Biology and Ecology courses in High School and College, in Environmental Studies, Economics, and any other course that studies population growth.

Populations share properties with other biological systems, made up as complex collections of similar components. They change in both size and structure when faced with external pressures and internal mutation. In most real cases, the nature of a population's response can itself change with the changes that occur in its environment.

Growth in both population and organisms can be seen easily in computer models. The models keep track of changes in sizes of populations or structures, displaying these changes generation by generation, or year by year, as appropriate.

Population size changes depend on the environment, whose carrying capacity controls absolute size. The rate of change may either be constant or itself depend on the environment.

You can use these programs to model size changes in a population under differing conditions:

- Unlimited carrying capacity;
- Limited, fixed carrying capacity;
- Randomly changing carrying capacity;
- Carrying capacity subject to reduction by increased population;
- Randomly and systematically changing carrying capacity; and
- Population dependent growth rate.

Populations change between generations by increments. There continues to be a disagreement as to whether population size increases arithmetically or exponentially. You can see the difference between arithmetic growth (growth by difference) and exponential growth every time you run the model. COLOR graphs help the student grasp the relationships of abstract ideas.

The Programs:

**POPULATION SIZES** - simulates a dynamic population - Growth can occur in a population under a variety of conditions. You can test the conditions, using either difference or differential solutions to the basic algorithm for increase in population size. Whichever you choose, the graph for both solutions will appear. Organ growth depends on the internal environment of the organism. Differences in growth rates between organs are called allometries. This program shows size changes in organs, illustrating allometric growth.

**PRICE: \$50.00**

**TITLE: BIOBITS IV: INTERACTIONS**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** The interactions between populations are easy to understand when you use this COMPress interactive program. Colorful graphs make this model based on the Volterra-Lotka equation accessible to even the beginning biology student. Up to five populations can interact as competitors, prey, or predators to illustrate stable, cyclical and catastrophic relationships.

Suggested courses include: High School and College level Introductory Biology and Ecology, Environmental Studies, Policy studies, and Economics.

Communities have many populations which interact in various ways, enhancing or decreasing each others' chances for survival. Population Interactions links the behaviors of two or more populations (up to five) through "coefficients of interaction". Positive interaction occurs among competing populations: the presence of one decreases the size of the other. Negative interaction occurs when the presence of one population improves the prospects for increase in another. What happens when one

population competes with another for nutrients, when members of one eat members of the other, and when both prey on each other? With this model the student can discover for himself.

By including more than two populations you can see effects of competition among prey and among predators, as well as both eaters and eaten.

The model is based on the Volterra Lotka equation. It will run using either fixed or varying carrying capacities, as you choose. The Program:

INTERACTIONS - occur between populations in either of two ways: Positive or negative. In positive interactions, the presence of one population lessens the number present in another. In negative interactions one population causes an increase in the size of another. This model can show the interactions in as many as five populations.

**PRICE: \$50.00**

**TITLE: BIORITS V: PROFILE**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** Calculates age and sex distribution for stable and unstable populations. User can determine population characteristics.

This program is designed to be used in classes in Introductory Biology and Ecology, Anthropology, Sociology, History, Policy Studies, Economics.

Your students will enjoy learning about the reproductive capability of populations when they use this interactive computer-simulated laboratory.

In this program a population has structure in terms of the numbers of males and females present in each age group over the entire life span of the population. This structure remains stable when the factors that determine it don't change. Catastrophies produce dramatic, but transitory, changes in the population. Removal of the catastrophic conditions allows underlying conditions to reassert themselves, leading eventually to a restoration of the original structure.

Stable populations appear to have either a pyramidal or a columnar distribution. The former shows sharp reductions in successive age classes, with many young individuals and progressively fewer older ones. In consequence the average age is low. Pyramids occur when infant mortality is high and survivorship (from year to year) is high. Columnar distribution occurs when survivorship is high and most individuals remain alive until near their genetic age maximum.

The student may construct a population or use the sample population. He has control over such factors as age, birth rate, survivorship, juvenile mortality and others. The clear, detailed COLOR graphics vividly illustrate the population profile as it changes from year to year or decade to decade.

After each set of computations a histogram appears showing the generation, the number of young born, the total number of individuals alive, and the number of each age class.

The program is designed to encourage systematic exploration of each factor. Students will learn to recognize distribution profiles for different structures easily and quickly with PROFILE's charts and graphs.

**PRICE: \$50.00**

**TITLE: BIORITS VI: EVOLUTION**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** The programs in this unit illustrate a number of phenomena associated with evolution. Taken as a whole they



illustrate both selective and non-selective ways in which populations change. These class tested programs are designed for courses in Introductory Biology, Anthropology, Genetics, Evolution, and Human Genetics.

In this package as well as in real life, evolution changes populations of organisms until they can no longer exchange genes with related populations. Occasionally it occurs with a rush, through changes of chromosome numbers. Usually, it occurs slowly through a gradual accumulation of genetic mutation. These mutations show up as novelties in color, shape, behavior or physiology. Charles Darwin suggested that these novelties provide the basis for natural selection, the favoring of one individual over others in the reproductive sweepstakes. They also provide pockets of variation which, if isolated, can drift towards genetic isolation from their cousins.

In large populations, uninfluenced by mutation, selection, or migration, the frequencies of alternative genetic forms, alleles, remain constant. Use the Hardy-Weinberg program to see the way by which these factors can guide changes in allele frequencies.

Genetic drift can lead to allele extinction in small populations. You can see it numerically by choosing a small population size in the Hardy-Weinberg program. You can see it diagrammatically by using the Genetic Drift program. The color graphics aid users in visualizing and understanding these concepts of evolution.

The Programs:

**HARDY-WEINBERG** - illustrates changes in allele frequencies from generation to generation. Mutation, selection, and migration alter the frequencies of alleles and proportions of phenotypes. Lacking outside influences the ratios remain constant, except for random fluctuations known as genetic drift that affect small populations.

Specify whatever values you wish for population size, recessive allele frequency, immigration or emigration, mutation, and selective fitness for recessives, dominants, and heterozygotes. The model has an illustrative set that quickly goes to the elimination of one allele.

**GENETIC DRIFT** - This program illustrates random changes in the distribution of individuals in small populations with time. Up to 16 different species can occur in one population.

**PALINGEN** - is the tendency toward acceleration or retardation of development during evolution. Palingenesis expresses the idea that, over evolutionary time, species change seems to involve either recapitulation or paedomorphosis: Recapitulation occurs when organisms seem to pass through ancestral stages on their way to reproductive maturity. Paedomorphosis occurs when organisms appear to become sexually mature as juveniles. Paedomorphosis and recapitulation can both occur by processes of acceleration or retardation of the gonads and the soma. Retarded gonadal development leads to bodily enlargement, hypermorphosis, accelerated development to progenesis. Retarded somatic development leads to neoteny, accelerated development to recapitulation.

**ALLOMETRIC GROWTH** - Shows how differential rates affect growth in up to five different organs.

**PRICE: \$80.00**

**TITLE: BIOBITS VII: NUCLEIC ACID CONNECTION**

**PUBLISHERS NAME: CCM PRESS**

**DESCRIPTION:** Illustrates the transcription and translation of DNA in chromosomes into mRNA and polypeptides. Eleven mutagens may be used to alter the nucleic acid base. The program may be used to see outline drawings of the principal nucleic acid bases.



It's intended for use in courses in Introductory Biology, Cell Biology, Molecular Biology, Evolution, Genetics, Human Reproduction, Environmental Studies.

It explores the nature of nucleic acid bases, their function, and cause and effect of mutations. Nucleic acids play many roles in cells, they encode genetic information, carry that information to the locus of protein synthesis, and form parts of important metabolic coenzymes.

The Nucleic Acid connection runs from generation to generation through the genes and from nucleus to cytoplasm in messenger RNA. Sometimes called "The Central Dogma", it conveys information from DNA through RNA to proteins. On occasion it reverses, making DNA from RNA, but only in virally infected cells. This model creates an allele, that is it makes the two DNA strands that hold genetic information, it transcribes a messenger RNA molecule and translates that message into a polypeptide.

You can view COLOR diagrams of the principal nucleic acid base: A, Adenine; C, Cytosine; G, Guanine; T, Thymine; and in RNA, U, Uracil.

An animated, COLOR diagram illustrates the synthesis of the three different kinds of Ribonucleic Acid (RNA) in different parts of the nucleus, their independent transfer to the cytoplasm and their final association as a Polyribosome: The protein factory. Several transfer (T) RNA molecules (there is at least one for each of the 20 different amino acids) migrate into the cytoplasm. Then a single message (M) moves out, followed by several Ribosomal (R) RNA molecules. The RNA's then take their characteristic shapes, move into association and make proteins. After creating the allele you can mutate it, using one of a number of chemical and physical mutagens.

- Background
- 5-Promouracil
- Na Bisulfite
- Nitrosoguanidine
- Nitrous Oxide
- 2-Amino Purine
- Hydroxylamine
- Alkyl Sulfonates
- Acridines
- UV Radiation
- X Radiation

**PRICE: \$60.00**

**TITLE: BIOLOGY**

**PUBLISHERS NAME: J & S SOFTWARE**

**DESCRIPTION:** Main concepts covered in fifteen programs. Branches to Sub Program if student has difficulty. Hi-resolution version has pictures of plants, organs, cells, etc.

**PRICE:** \$ 19.95 Per program  
\$160.00 For set  
\$ 26.00 Per program (Hi-Resolution Version)  
\$225.00 For set

**TITLE: CELLM**

**PUBLISHERS NAME: INST SYS/SCHOOL DIST OF PHILADELPHIA**

**DESCRIPTION:** Ability to act as a cell membrane tested.

**PRICE:**

**TITLE: CHEM LAB SIMULATIONS 3: CALORIMETRY**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** Demonstrates Hess' Law by having the user determine

ED-150

the heats of reaction of three separate chemical reactions. Dynamic high-resolution graphics provide a realistic animation of the actual steps in the calorimetry experiments such as heating water with a Bunsen burner and mixing reactants in a calorimeter.  
**PRICE: \$100.00**

**TITLE: CHEM LAB SIMULATIONS 4: THERMODYNAMICS**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** In this simulation, capillary tube experiments illustrate: \* Heat of Vaporization, \* Thermodynamics of an Equilibrium Reaction. High-resolution graphics enable the user to heat samples and collect accurate pressure and temperature data which is graphically plotted on the video monitor. The slope of the plotted line is used to identify an unknown liquid in the Heat of Vaporization experiment, and to calculate the enthalpy, entropy, and free energy of the equilibrium reaction in the second Thermodynamics experiment.

**PRICE: \$100.00**

**TITLE: CHEMICAL SYMBOLS**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** A drill and practice program on the names and symbols for the elements. The user may elect to practice on only the common elements or an all known elements. The user may also elect to respond with either the chemical symbol or the name. A mixed mode generates questions so that the learner must randomly respond with both symbols and names. Performance report generated upon termination of session.

**PRICE:**

**TITLE: CHEMISTRY**

**PUBLISHERS NAME: J & S SOFTWARE**

**DESCRIPTION:** 15 C.A.I. HIGH SCHOOL AND JUNIOR COLLEGE CHEMISTRY PROGRAMS

**FEATURING:**

- \* Reviews and teaches main concepts in each topic.
- \* No two students get exactly the same questions.
- \* Each program requires 20-30 minutes to complete.
- \* A fun and motivating way to learn.
- \* Names and grades can be stored on a disk file (optional).
- \* All programs have been thoroughly tested and debugged.

**PROGRAM TITLES ARE:**

- \* Gas Relationships
- \* Moles and Formulas
- \* Chemical Equations
- \* Solutions
- \* Periodic Table
- \* Electron Structure
- \* Bonding Molecules
- \* Bonding Between Molecules
- \* Kinetics
- \* Equilibrium
- \* Electrochemical Cells
- \* Oxidation-Reduction
- \* Acid-Base Theories
- \* Acid Base Problems
- \* Organic Chemistry

Hi-resolution version has pictures of graphs, charts, molecules, etc.

**PRICE: \$ 19.50 Per program**  
**\$150.00 For the set**

**\$ 25.50 Per program with hi-resolution**  
**\$225.00 For the set with hi-resolution**

**TITLE: CHEMISTRY II DISK**

**PUBLISHERS NAME: MICROPHYS PROGRAMS**

**DESCRIPTION:** CONTAINS THE FOLLOWING PROGRAMS:

**THE MOLARITY CONCEPT** - Generates a series of 3 questions dealing with the concept of molarity; the mole concept is also reviewed.  
**THE NORMALITY CONCEPT** - Generates a series of questions dealing with the concepts of gram-molecular mass, gram-equivalent mass, and normality.

**THE MOLALITY CONCEPT** - Generates a series of questions dealing with the concepts of gram-molecular mass and molality.

**STOICHIOMETRY: MASS/MASS** - Generates a series of questions which permits the development of facility in solving problems which involve mass/mass relationships in various chemical reactions.

**STOICHIOMETRY: MASS/VOLUME** - Generates a series of questions which permits the development of facility in solving problems which involve mass/volume relationships in various chemical reactions.

**STOICHIOMETRY: VOLUME/VOLUME** - Generates a series of questions which permits the development of facility in solving problems which involve volume/volume relationships in various chemical reactions.

**STOICHIOMETRY: GENERAL** - Generates a series of questions dealing with stoichiometric relationships in chemical reactions. Mass/mass, mass/volume, and volume/volume problem types are randomly generated.

**PERCENT CONCENTRATION** - Generates a series of questions relating to the computation of the percent or fraction concentration of randomly generated solutions.

**pH CONCEPT** - Generates a series of questions dealing with the concept of pH and pOH. The student gains facility in working with logarithmic scales.

**EMF OF ELECTROCHEMICAL CELLS** - Generates a series of questions in which the student determines the EMF of a randomly synthesized electrochemical cell.

**CHEMISTRY ANALYSIS I** - This utility program is designed to solve problems involving the mole concept and molarity.

**CHEMISTRY ANALYSIS II** - This utility program is designed to provide solutions to problems involving normality, molality, changes in freezing and boiling points of solutions.

**STOICHIOMETRIC ANALYSIS** - This utility program is designed to provide solutions to problems involving mass/mass, mass/volume, and volume/volume relationships in chemical reactions.

**PRICE: \$180.00**

**TITLE: COMMUNICATIONS**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Sixth graders

From the simplest beat of the tom-tom to the most sophisticated laser beam communications system the student is taken on a trip through time. Basic facts about communication, how it is used, its importance and how its speed has changed our lives is covered.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: COMPTROL LINEAR ACCELERATION**

**PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** The Comptrol Linear Acceleration disk is used with

**ED-152**

the photodetector for simple and accurate experiments on free fall and on acceleration down an airtrack. In one mode, the program measures the final speed and time of fall of an object accelerating through a given distance. In another mode, it measures the time, speed and position of an accelerating object at a number of points. Data are plotted on the screen and the least squares fit is displayed. A student manual giving a complete description of the experiment is included.

**PRICE: \$95.00**

**TITLE: COMPTROL PACKAGE**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Photodetector with Pendulum and Linear Acceleration disks.

**PRICE: \$260.00**

**TITLE: COMPTROL PENDULUM**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** The CompTrol Pendulum disk is used with photodetector for precise measurements of a pendulum experiment. Accurate to 1 ms, this experiment can measure  $g$  to 0.5% and the variation of period with amplitude to 2%. Data are plotted on the screen, and the least squares fit is displayed. A student manual giving a complete description of the experiment is included.

**PRICE: \$95.00**

**TITLE: DENSITY LAB**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** A complete lab exercise. The computer is used for preliminary data reduction, error analysis, and graphing. The results are stored to disk for later use by the teacher in evaluating student performance.

**PRICE: \$40.00**

**TITLE: DESCRIPTIVE STATISTICS**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** Designed to be a brief supplement to standard textbooks on elementary statistics and probability. Provides a discussion of methods and their intelligent uses in descriptive statistics, as well as an introduction to statistical calculations using the computer.

Various methods for describing and summarizing raw data are discussed.

Problem assignments are computer oriented.

The Programs:

**GROUP** - This program computes:

- The Grouped Mean
- Variance
- Standard Deviation for Continuous Data

**STATMEAS** - Given a set of data this program will:

- Order the Data
- Compute Measures of Location
- Compute Measures of Dispersion

Data may be entered from a file or from a keyboard.

**FREQDIST** - For a given set of data, this program:

- Constructs a Frequency Distribution
- Graphs a Frequency Histogram

**FREQTAB** - For a given set of data, this program:

- Constructs a Frequency Table



- Plots a Line Graph  
PRICE: \$60.00

**TITLE: EDUCATIONAL PROGRAMS**

**PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

**DESCRIPTION:**

SPELLING - GRADE 1  
SPELLING - GRADE 2  
SPELLING - GRADE 3  
SPELLING - GRADE 4  
SPELLING - GRADE 5  
SPELLING - GRADE 6  
SPELLING - GRADE 7  
SPELLING - GRADE 8  
IMPROVE YOUR VOCABULARY 1  
IMPROVE YOUR VOCABULARY 2  
ENGLISH GRAMMAR - GRADE 3  
ENGLISH GRAMMAR - GRADE 4  
ENGLISH GRAMMAR - GRADE 5  
ENGLISH GRAMMAR - GRADE 6  
ENGLISH GRAMMAR - GRADE 7  
ENGLISH GRAMMAR - GRADE 8  
ENGLISH GRAMMAR - GRADE 9  
ENGLISH GRAMMAR - GRADE 10  
ENGLISH GRAMMAR - GRADE 11  
ENGLISH GRAMMAR - GRADE 12  
ENGLISH - WORKING WITH SYNONYMS & ANTONYMS  
ENGLISH - WORKING WITH ADJECTIVES  
ENGLISH - WORKING WITH ADVERBS  
ENGLISH - WORKING WITH CONTRACTIONS & HOMONYMS  
ENGLISH - WORKING WITH SUBJECT & NOUNS  
ENGLISH - WORKING WITH PRONOUNS & PREPOSITIONS  
ENGLISH - WORKING WITH VERBS  
FRENCH I  
FRENCH II  
SPANISH I  
SPANISH II  
GERMAN I  
GERMAN II  
COLONIAL PERIOD, CONSTITUTIONAL PERIOD  
CIVIL WAR PERIOD, INDUSTRIAL REVOLUTION  
WORLD WAR I  
WORLD WAR II  
GEOGRAPHY TERMS, CAPITALS OF THE U.S.  
HAM RADIO Novice Ham License Review  
MATHEMATICS - GRADE 1  
MATHEMATICS - GRADE 2  
MATHEMATICS - GRADE 3  
MATHEMATICS - GRADE 4  
MATHEMATICS - GRADE 5  
MATHEMATICS - GRADE 6  
MATHEMATICS - GRADE 7  
MATHEMATICS - GRADE 8  
ADDITION FACTS  
SUBTRACTION FACTS  
MULTIPLICATION FACTS  
DIVISION FACTS  
NOTE: These programs require TYC's INDIVIDUAL STUDY CENTER.  
PRICE: \$4.95 each

**TITLE: EDUTECH SAMPLER**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** This unit consists of programs and manuals from four different EduTech series. The programs are:

Fourier Synthesis  
Two Point Charges  
Artillery Commander  
Plotting a Line

The Manuals are:

Computer Simulated Physics Demonstrations  
Computer Simulated Physics Experiments

Target

Math Lab I

This sampler, containing a variety of programs for different levels, is ideal for workshops and teacher groups studying the uses of computer simulation in science education.

ES-1 EduTech Sampler contains one diskette and four manuals.

**PRICE: \$50.00**

#### **TITLE: ELECTRIC FIELD**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Using the game controls, students can move a dot anywhere on the screen. By pressing a button, a short line segment is drawn in the direction of the electric field (or equipotential) at the position of the dot. In this way, students can map the lines of force and equipotentials for several distributions of point charges. As a final exercise, the point charges are not displayed. The student is asked to determine their position, magnitudes, and signs by plotting the lines of force they produce.

**PRICE: \$95.00**

#### **TITLE: ELEMENTS & SYMBOLS**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** Ten questions, randomly selected from 100 elements and polyatomics, are asked about elements and their symbols. Two versions are provided, one for practice and one for a quiz. The quiz results are diagnosed and stored on disk.

**PRICE: \$40.00**

#### **TITLE: FUNDAMENTAL SKILLS FOR GENERAL CHEMISTRY**

**PUBLISHERS NAME: PROGRAMS FOR LEARNING**

**DESCRIPTION: FEATURES:**

BALEQ - drill on balancing equations.

CONVERT - drill on Metric/English conversions.

DENSITY - practice with problems concerning density, mass and volume.

ELEMENT - drill on symbols, atomic number, electron configuration of first 20 elements.

EXPO - tutorial exercise explaining exponential notation.

IONS - drill concerning symbols and charges for common ions.

METRIC - drill on SI units of mass, length and volume.

MOLWT - practice in computing formula weights.

NOMEN - drill on names and formulas for common compounds.

SIGHELP - drill on significant figures.

SYMBOL - drill on names and symbols of elements.

TEMP - practice with temperature conversions.

**PRICE: \$150.00** twelve programs with instructor's guide

#### **TITLE: GAS LAWS**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Boyle's Law, Charles' Law, the Ideal Gas Law, piston

experiments, animated hires experiments.  
**PRICE: \$29.95**

**TITLE: GEOMETRICAL OPTICS**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Demonstrates many of the basic concepts of geometrical optics such as reflection, refraction, reversibility, and convex lenses. Includes a game in which a laser beam must be correctly refracted through a semi circular lens in order to hit an enemy alien.

**PRICE: With manual \$65.00**

**TITLE: GRAPHS**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** The student is drilled on reading points from a graph and plotting points on a graph. The plotting of linear and quadratic equations is also drilled. Student response is compared graphically to the correct response.

**PRICE: \$65.00**

**TITLE: HARMONIC MOTION WORKSHOP**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** Visually presents simple and damped harmonic motion by the user of Hi-Resolution graphics. An object is placed in harmonic motion on the screen. By using the keyboard, the student can alter such variables as the phase, amplitude, and the damping factor. Then he immediately sees the effect that is made on the motion of the object. The instantaneous velocity and acceleration vectors, kinetic and potential energy values, and a corresponding object in circular motion can also be displayed at the touch of a key...while the object is in motion.

**PRICE: \$75.00**

**TITLE: INSECTS**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Fourth graders

This program provides the student with some interesting background information on insects. A series of questions will help the student check to see if he/she has remembered the information. A good basic beginning with enough information to start the student searching further, for an in-depth research report. Many topics can be garnered from this program.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: INTERP-WAVE SUPERPOSITION**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** Designed to improve students' understanding of the use of models in physics. The unit is built around the wave theory of light and attempts to show students how effective the theory is in explaining observed phenomena. Interp is not intended to replace the usual teaching of interference and diffraction phenomena. The aim is to focus students' attention on the physical model used to explain the observations in a way that, because of the mathematics involved, is not simple to do without a computer. The unit is intended to encourage a more critical attitude to the use of models in physics in general, by emphasizing and investigating some of the assumptions (nearly always made but hardly ever mentioned) in this one example. It

is a general awareness of this aspect of physics as much as any particular lessons about physical optics that it is hoped will be achieved.

The Students' Notes provide information that guides the student through three investigations of interference and diffraction phenomena using the computer program. After some introductory (review) questions the student is invited to use the program to predict the intensity distribution given by two (equal intensity, in phase) sources of monochromatic radiation. This is intended as a preliminary exercise to show that the program gives sensible results for a situation where the student knows what to expect. The second investigation is to use two splits of finite width instead of two sources. It is hoped that students will see that this computer prediction is closer than the previous one to what is observed in a two-slit experiment with light or 3 cm radio waves. Students are told that the usual treatment of these effects (based on Huygens' principle plus wave superposition) involves some simplifications, and they are challenged to think what these are. The Notes also raise the question of how many secondary sources must be considered to make an adequate prediction.

Each of these factors is discussed briefly and in the third investigation students are invited to explore the effect of each one on the predicted intensity pattern in a two-slit experiment. They are asked to compare these various predictions with measurements made using 3 cm radio waves and to make judgements about the importance of the different factors for this experiment and also for a Young's experiment using visible light. The work so far has been restricted to variations along a line parallel to the slits or sources. As an optional extension of their work, students can explore variations along a line perpendicular to the slits or sources.

**PRICE: \$35.00**

**TITLE: INTRODUCTION TO ORGANIC CHEMISTRY**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** These programs are designed as a supplement to a first course in organic chemistry. They provide an introduction with practice on nomenclature and simple reactions of alkenes, alkyl halides, alcohols, aldehydes and ketones, carboxylic acids and arenes. In addition, the programs allow students to practice single functional group multistep aliphatic synthesis and the preparation of arenes with one or two substitution.

Infrared and proton nuclear magnetic resonance spectroscopy is introduced of simple unknowns from their IR and NMR spectra. Spectroscopy is used throughout the programs in the development of functional group chemistry.

The relative reactivity of alkyl halides and the stereochemistry of bimolecular displacement reactions is demonstrated through simulated experiments and animations.

Other simulated experiments include the determination of the mechanism of aromatic nitration, lithium aluminum hydride reductions, aldol condensations, the relative acidity of carboxylic acids, the hydrolysis of esters, and the product of the oxidation of a primary alcohol.

**DISK 1: ALKANES AND ALKENES**

Introduction

Alkane Nomenclature: Rules

Alkane Nomenclature: Practice

Drawing Structural Formulas

Alkene Structure and Nomenclature

Reactions of Alkenes

Alkene Chemistry Problems



**DISK 2: SUBSTITUTION REACTIONS**

Bimolecular Substitution Reactions

Reactivity of Alkyl Halides

Racemization and Exchange Experiment

Stereochemistry of Substitution

**DISK 3: IR AND NMR SPECTROSCOPY**

Infrared Spectroscopy

Infrared Problems

Nuclear Magnetic Resonance

NMR Spin-spin Splitting

NMR/IR Problems

**DISK 4: ARENES**

Aromatic Compounds

Nomenclature of Arenes

Nitration Experiment

Reactions of Arenes

Orientation Effects

Multistep Aromatic Synthesis

**DISK 5: ALCOHOLS**

Nomenclature of Alcohols

Grignard Reagents

Grignard Chemistry Problems

Reactions of Alcohols

Oxidation of Alcohols

Alcohol Chemistry Problems

Multistep Aliphatic Synthesis

**DISK 6: ALDEHYDES AND KETONES**

Introduction to Aldehydes and Ketones

Nomenclature of Aldehydes and Ketones

Acetals and Ketals

Mechanism of Oxime Formation

Reduction of Carbonyl Groups

Hydrogen-Deuterium Exchange

Aldol Condensations

Carbonyl Chemistry Problems

**DISK 7: CARBOXYLIC ACIDS**

Nomenclature of Carboxylic Acids

Acidity of Carboxylic Acids

Reactions of Carboxylic Acids

Esterification Experiment

Ester Hydrolysis

RCOOH Chemistry Problems

**PRICE: \$350.00; all 7 disks**

**\$60.00; each disk**

**TITLE: INTRODUCTORY MECHANICS FOR THE APPLE II**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** Those of us who learned physics before the computer age recall the power promised by the "universality" of Newton's Second Law of Motion. Even more vividly we recall our frustration when we found that we could practically apply the law only to very simple problems- the all-too-familiar blocks on inclined planes or weights suspended from pulleys. The computer offers a dramatic improvement, as this package illustrates. Introductory Mechanics epitomizes the simplicity and the power of applying the computer to solving problems in physics. The materials focus on the application of the Second Law to the simple harmonic oscillator and to the motion of particles in two dimensions, under the influence of uniform fields or one or more force centers.

Introductory Mechanics represents a merger of two earlier CONDUIT units, ICBM I and ICBM II. As in the earlier units, the materials emphasize problem solving. In general when students

use the computer to "solve problems" they may utilize existing programs (for example, for statistical analysis), they may write their own programs, or they may start with some example programs and make modifications to meet their specific needs. This package uses the third approach.

Introductory Mechanics guides students toward applying this numerical technique to problems that pre-computer age students avoided altogether because of the analytical intractability of the problems. The modern student can thus acquire far higher experience with physical phenomena (albeit simulated) than was previously possible. And the experience with the numerical methods in mechanics lays the basis for using the same methods and their extensions for solving differential equations encountered elsewhere in physics.

The numerical methods by no means replace analytical techniques, but they do dramatically supplement and extend them. Similarly, this package does not replace traditional textbooks but it can serve as a powerful supplement.

**PRICE:**

**TITLE: INTROSTAT**

**PUBLISHERS NAME: MICROSTAT SOFTWARE**

**DESCRIPTION:** This is a statistical package designed for students and researchers in the behavioral sciences. It includes a sample data set adapted from "StatLab: An Empirical Introduction to Statistics" by Hodges et al (McGraw-Hill, 1975). It also includes a complete data file management program which enables the user to create, modify, and update data files for use by the package's statistical programs. The statistical procedures available are those which are commonly encountered in a first-year statistics course, including some non-parametric tests which are rarely available in statistical packages:

Descriptive Statistics for One Variable: minimum, maximum, mean, standard deviation, standard error of the mean; optional median and frequency table

Contingency Table (crosstabulation of two variables) with chi-square test

Student's t-test (two-group): simple or matched-pairs; optional one-group test

Mann-Whitney U Test

Wilcoxon Matched-Pairs Signed-Ranks Test

One-Way Analysis of Variance

Two-Way Analysis of Variance

Two-Variable scatterplot in high-resolution graphics (optional regression line)

Pearson Correlation Matrix

Simple Linear Regression

**OUTPUT**

The package is very easy to use. Statistical procedures are chosen from a "menu" of options. Similar to Minitab, variables are referred to by a number, but like SPSS it displays variable levels on the screen with the statistical results and the number of valid and "missing datum" cases on which computations are based. The statistical significance of each test result may be looked up in the tables published in most statistics texts. The number of decimal places to be displayed on the screen may be modified by the user. Users having a printer can easily obtain hard copy output of their analysis.

**PRICE:**

**TITLE: LAB PLOT**

**PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

ED-159

**DESCRIPTION:** When you need to show your students how to analyze their experimental data, from lab or class work, you can use this save them time. It also teaches how to use an empirical method of plotting for straight lines to determine the natural law relating their variables.

- \* A tutor in graphic methods of analysis.
- \* A program that helps them discover any empirical relationship by replotting.
- \* A program that illustrates a useful mathematical method to find a 'law'.
- \* Save student time in their analysis of experimental data.

**PRICE: \$32.00**

**TITLE: LIVING THINGS**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Second graders

A brief look at the living things that exist here on earth; plants, people, animals, and how we live together, helping each other. Simple questions and matching game complete this program.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: MECHANICS**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Demonstrates the hunter-monkey paradox, vertical fall with and without air resistance, and planetary motion. In the hunter-monkey demonstration, the angle of the rifle is adjusted using a game paddle. The rifle is first fired with gravity turned off, in order to determine the direction of the straight line from the rifle to the monkey.

**PRICE: With manual, \$65.00**

**TITLE: MECHANICS AND MOTION**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Vectors, distance/time graphs, velocity/time graphs, acceleration units, ticker tape experiments.

**PRICE: \$29.95**

**TITLE: MENDELIAN GENETICS ("GENIE")**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** An interactive computer simulated laboratory in Mendelian Genetics written in BASIC. It can simulate a wide range of genetic phenomena including dominance, partial dominance, lethality, linkage, and sex linkage. As many as three traits may be simulated at any relative map location on the same or different chromosomes. Multiple allele system may have as many as five alleles and may display any possible combination of dominance and partial dominance. Use of the program is divided into units within which specific phenomena are explored according to instructor specifications.

In the TEST mode the student is presented with a series of sample populations whose genetic characteristics are determined by instructor specified templates. The student must diagnose the characteristics by making a series of matings; the program will then check the diagnosis.

There is also an EXPERIMENT mode in which the student can define the characteristics of the sample.

GENIE may be used by itself or with MENDELIAN GENETICS: A Problem-Solving Approach. A Study Guide to GENIE is included in the text.

These class tested materials are designed to teach Mendelian Genetics in a context which emphasizes solving problems and building scientific models as aids to predicting further observations. They begin with a very simple "tentative explanation" of how traits are inherited or populations grow. The student then compares this explanation with new observations, and sequentially throughout the tutorial is required to modify or expand the explanation, observe again, and tentatively explain, predict, and test new concepts as presented until, after many revisions, a wide variety of phenomena can be predicted accurately.

Each section ends with a self-test on the concepts presented and a summary of the explanation as it has been developed to that point.

These explanations are always constructed with respect to an explicit collection of concepts and principles developed to that point in the tutorial.

Numerous problems are provided throughout, and complete solutions appear at the end of texts.

**PRICE: \$60.00**

**TITLE: METRI-VERT**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** Elegant menu-driven routines compute conversions for length/distance, area, volume, weight and temperature. Also includes a "display page" which stores the result of up to 20 calculations for easier use.

**PRICE: \$ 9.95 Cassette**

**\$15.95 Disk**

**TITLE: MILLIKAN**

**PUBLISHERS NAME: MENTOR SOFTWARE, INC.**

**DESCRIPTION:** The Millikan oil drop experiment is frequently omitted in high school and college physics courses due to time, cost and complexity of equipment. Using this package, your students can simulate the Millikan experiment and thereby gain a better understanding of the physical concept involved. Students can actually watch and control the drops as they move between the charged plates on the screen. Package includes user's guide. High School-College.

**PRICE: \$19.95**

**TITLE: NEWTON - SATELLITE ORBITS**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** Uses an iterative method to calculate the path of a projectile launched horizontally. Students are able to investigate how the path taken depends on the height of the mountain and the initial speed. The student is challenged to find the initial velocity needed for the minimum (circular) orbit, and to compare the period and shape of orbits of different sizes with data for earth satellites. The simulation encourages students to think about the relationship between models (in this case, Newton's Law of Gravitation and his Second Law of Motion and the physical phenomena these models explain).

The objectives which might be achieved with this unit include:

- 1) extending students' knowledge of projectile motion from the simplest case (a "flat earth" and constant gravitation force), to the more general (round earth, force varying with distance)
- 2) an appreciation of how the application of Newton's second law, and his law of gravitation leads to the prediction of satellite orbits



- 3) knowledge of the possible shapes of orbits
- 4) some idea of the periodic time of orbits, and of the effect on the orbit of varying launch velocity
- 5) the application of a familiar idea (conservation of energy) in a new situation
- 6) thinking about the relationship between a simplified model and the actual situation it is used to describe
- 7) an appreciation of the use of a computer to solve a problem which students cannot solve analytically

**PRICE: \$35.00**

**TITLE: NONCONSTANT ACCELERATION**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** The laboratory manual explains how to write simple programs in BASIC to solve for the motion of a mass moving with arbitrary acceleration. Iterating the equation for constant acceleration, the student first solves the problem of a falling body subjected to air resistance. The results of this calculation are compared to measurements made of simulated motion. The student then solves problems of harmonic and anharmonic motion, and compares these results to the measurements of simulated motion of the same kind. For the oscillatory motions, students use a simple, but very powerful, variation of the Euler approximation that Professor Cromer recently discovered (Am. J. Phys. 49, 455 [1981]). This experiment includes enough work for several laboratory sessions. Knowledge of calculus is not required.

**PRICE: \$95.00**

**TITLE: OPTICS, WAVE MOTION, AND ELECTRICITY**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Demonstrates the lens formula, superposition of waves, and the electric field. In the electric field demonstration, the game paddles are used to move a test charge around two point charges. Whenever the button on a game paddle is pressed, a short line is drawn in the direction of the electric field at the position of the test charge.

**PRICE: With manual, \$65.00**

**TITLE: ORBITING AND ROTATING FIGURES**

**PUBLISHERS NAME: MATH SOFTWARE**

**DESCRIPTION:** A demonstration program for introducing solid figures in geometry, discussing orbital mechanics in physics, and for visualizing the solids generated when a planar or 3-D object is rotated in space. The demonstrations include cones (both one and two nappes), cubes, cylinders, pyramids, and octahedrons as well as several others.

Through the used of the game paddles and keyboard you can rotate the objects about their altitudes or a central axis as well as rotate them about their altitudes or a central axis as well as rotate them about an elliptical orbit. You can also change the object's colors and the speed of the rotation. Moreover, it is possible to leave a trail of the object as it is rotated so that you can see where the object was as well as where the object is at the present time.

**PRICE:**

**TITLE: ORDERIDENT**

**PUBLISHERS NAME: EDUCATIONAL COMPUTING**

**DESCRIPTION:** An interactive, menu-driven, computer program that

can identify any North American insect to one of 26 Orders in the Class Insecta. Self-prompting, user friendly, error-free, and without technical jargon.

- \* Stimulates interest in insect biology.

- \* Comes with full documentation, including sample runs.

- \* Does not require a printer.

**PRICE:** \$44.95 Diskette US shipments add \$1.50 for shipping and handling. Outside US add \$4.00 for shipping and handling. Virginia residents add 4% sales tax.

**TITLE: ORGANIC CHEMISTRY**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** These programs are designed as a supplement to a first course in organic chemistry. They provide an introduction with practice on nomenclature and simple reactions of alkenes, alkyl halides, alcohols, aldehydes and ketones, carboxylic acids and arenes. In addition, the programs allow students to practice single functional group multi-step aliphatic synthesis and the preparation of arenes with one or two substituents.

Infrared and proton nuclear magnetic resonance spectroscopy is introduced and practice provided in the identification of simple unknowns from their IR and NMR spectra. Spectroscopy is used throughout the programs in the development of functional group chemistry.

The relative reactivity of alkyl halides and the stereochemistry of bimolecular displacement reactions is demonstrated through simulated experiments and animations.

Other simulated experiments include the determination of the mechanism of aromatic nitration, lithium aluminum hydride reductions, aldol condensations, the relative acidity of carboxylic acids, the hydrolysis of esters, and the product of the oxidation of a primary alcohol.

These disks include programs on the following: Alkanes and Alkenes, Substitution Reactions, IR and NMR Spectroscopy, Arenes, Alcohols, Aldehydes and Ketones, and Carboxylic Acids. (A Demonstration Disk is available).

**PRICE:**

**TITLE: ORGANIC NOMENCLATURE**

**PUBLISHERS NAME: PROGRAMS FOR LEARNING**

**DESCRIPTION:** ALKANE- drill and practice with IUPAC nomenclature of alkanes. Structures are drawn by random substitution of hydrogen by methyl, ethyl or propyl groups on butane. An incorrect response results in redrawing the structure with the longest chain straightened and numbered.

ALKYL- drill and practice classifying and naming alkyl derivatives selected at random from among twelve different types of compounds, ranging from alcohols to thiols.

AMINO- drill and practice with IUPAC nomenclature for arenes. Compounds involve the substitution of one or more randomly selected substituents such as halides, nitro, methyl, etc.

OPTISO- drill and practice with stereoisomerism.

Package OR-1 Five programs with instructor's guide

**PRICE: \$100.00**

**TITLE: OUR BODIES**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Second graders

Very simple and basic approach to the different systems in our bodies and what each one does. Also included is information on why we do the things we do to maintain the health of our bodies.

A little game, at the end, checks the student's knowledge of the material given and rewards correct answers.

PRICE: Diskette: \$15.00

Cassette: \$13.00

**TITLE: PARABOLIC MOTION**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** The game control paddles are used to vary the initial speed and initial height (or angle) of a projectile. Students calculate the acceleration of gravity from time and distance measurements. This experiment also includes a simulation of the hunter-monkey demonstration, which dramatically illustrates that the acceleration of a projectile is independent of the projectile's velocity.

PRICE: With manual, \$95.00

**TITLE: PHMETER/SPECTRO/WHEATSTONE**

**PUBLISHERS NAME: PROGRAMS FOR LEARNING**

**DESCRIPTION:** These three programs are simulations designed to introduce measurement techniques involving a pH meter, spectrophotometer and Wheatstone Bridge. For each of these instruments there is a prescribed sequence of steps which must be followed carefully, hence the programs focus on executing the steps properly. Game control knobs and paddles are used to turn switches on and off, and adjust settings, thus a student can acquire a "feel" for each instrument. The programs are therefore particularly useful for pre-lab orientation, as well as class demonstrations.

PRICE: \$35.00 each

**TITLE: PHYSICS**

**PUBLISHERS NAME: J & S SOFTWARE**

**DESCRIPTION:** 8 C.A.I. HIGH SCHOOL AND JUNIOR COLLEGE PHYSICS PROGRAMS.

**TITLES**

CIRCULAR MOTION. NEWTON'S LAWS. ACCELERATION. UNIFORM MOTION. FREE FALL. PROJECTILE PROBLEMS. MOMENTUM. WORK AND ENERGY.

**FEATURING**

- \* Hi-resolution graphs and experimental set-ups.
- \* Review and teaches main problem areas.
- \* Changing variables in questions and experiments.
- \* Emphasizes experiments and problems.
- \* Student names and grades are stored.
- \* Requires 30-45 minutes for each program.

PRICE: \$ 25.00 per program

\$125.00 all eight

**TITLE: PHYSICS - FREE FALL**

**PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

**DESCRIPTION:** Introduction to free - all concepts. Contents:

- \* Bomb - dropping water bombs on a fire
- \* Arrows - simulation for shooting arrows
- \* Restitution - bouncing objects
- \* Throw - vertical flight of a ball
- \* Stopwatch - a real-time timer for lab work
- \* Calculator - science calculator

PRICE: \$32.00

**TITLE: PHYSICS DEMOS PACKAGE**

ED-164



**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** All four Demos diskettes (Mechanics; Optics, Wave Motion, and Electricity; Geometrical Optics; Advanced Physics) and one manual.

**PRICE: \$225.00**

**TITLE: PHYSICS DEMOS SET**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Any three of the four Demos diskettes and one manual.

**PRICE: \$165.00**

**TITLE: PHYSICS I DISK**

**PUBLISHERS NAME: MICROPHYS PROGRAMS**

**DESCRIPTION:** Contains the following programs:

**LINEAR KINEMATICS** - Generates a series of 5 questions dealing with linear motion and the analysis of a graph of instantaneous speed versus time.

**PROJECTILE MOTION** - Generates a series of 11 questions dealing with the analysis of a projectile in flight. The basic definitions of kinematics are thus reviewed.

**MOMENTUM AND ENERGY** - Generates a series of 11 questions dealing with the concepts of linear momentum, impulse, and kinetic energy.

**ENERGY AND THE INCLINED PLANE** - Generates a series of 10 questions dealing with the analysis of the motion of a particle on an inclined plane. The concepts of work, kinetic energy and potential energy are thus reviewed.

**INELASTIC COLLISIONS** - Generates a series of 7 questions dealing with the analysis of an inelastic collision. The concepts of linear momentum and kinetic energy are reviewed.

**CENTRIPETAL FORCE** - Generates a series of 6 questions dealing with the analysis of the motion of a particle undergoing uniform circular motion.

**PULLEY SYSTEM-MACHINES** - Generates a series of 7 questions dealing with the analysis of pulley system consisting of single, double, or triple fixed and moveable blocks. The concepts of work and efficiency are thus reviewed.

**CALORIMETRY** - Generates a series of 4 questions dealing with the principle of calorimetry. The definition of specific heat capacity and the conservation of energy principle are thus reviewed.

**SPECIFIC HEAT CAPACITY** - Generates a series of 3 questions dealing with the concept of fusion and vaporization.

**VECTOR ANALYSIS I** - Generates problems in which the student is asked to determine the magnitude and direction of the resultant of a concurrent system of three to five vectors.

**VECTOR ANALYSIS II** - This utility program is designed to determine the magnitude and direction of a system of concurrent vectors.

**PROJECTILE ANALYSIS** - This utility program is designed to solve the general projectile motion problem. Time of flight, horizontal range, final velocity, and angle of impact are among the values determined.

**CALORIMETRY ANALYSIS** - This utility program is designed to solve the various time-consuming problems involved in the study of calorimetry. Substances undergoing changes in phase, as well as changes in temperatures, may be dealt with by this problem.

**PRICE: \$180.00**

**TITLE: PHYSICS II DISK**



**PUBLISHERS NAME: MICROPHYS PROGRAMS**

**DESCRIPTION:** Contains the following programs:

**SPECIFIC GAS LAWS** - Generates a series of 3 questions dealing with gases undergoing isothermal, isobaric, and isovolumic processes. thus, Boyle's Charles', and Gay-Lussac's Laws are reviewed.

**GENERAL GAS LAW** - Generates a series of questions dealing with a confined gas which undergoes an isobaric process. The concepts of molar heat capacity. Charles' Law, and the first law of thermodynamics are thus reviewed.

**THERMODYNAMICS I** - Generates a series of 5 questions dealing with a confined gas which undergoes an isobaric process. The concepts of molar heat capacity. Charles' Law, and the first law of thermodynamics are thus reviewed.

**THERMODYNAMICS II** - Generates a series of 5 questions dealing with a confined gas which undergoes an isobaric compression which a quantity of heat is removed.

**TRANSVERSE STANDING WAVES** - Generates a series of 4 questions dealing with the study of the standing wave pattern established in a wire which is fastened at both ends.

**LONGITUDINAL STANDING WAVES** - Generates a series of 4 questions dealing with the longitudinal wave pattern established in open and closed organ pipes.

**MIRRORS AND LENSES** - Generates a series of 5 questions dealing with the image-forming properties of convex and concave mirrors and lenses.

**REFRACTION OF LIGHT** - Generates a series of 3 questions dealing with the behavior of light rays striking a planar interface between two optical media.

**SERIES CIRCUIT ANALYSIS** - Generates a series of 10 questions dealing with the analysis if a series circuit consisting of three resistors and a battery. The concepts of resistance, potential difference, and power are thus reviewed.

**PARALLEL CIRCUIT ANALYSIS I** - Generates a series of 10 questions dealing with the analysis of a parallel circuit consisting of three resistors and a battery. The concepts of resistance, potential difference, and power are thus reviewed.

**PARALLEL CIRCUIT ANALYSIS II** - Generates a series of 6 questions dealing with the analysis of a parallel circuit consisting of three resistors and a battery. The concepts of resistance, potential difference, and Ohm's Law are thus reviewed.

**SERIES/PARALLEL CIRCUIT ANALYSIS** - Generates a series of 6 questions dealing with the analysis of a circuit in which a single resistor is in series with a parallel combination of two resistors.

**ELECTRIC FIELD ANALYSIS** - Generates a series of 6 questions dealing with the work done in transferring a charged particle between two points in a uniform electric field.

**PHOTOELECTRIC EFFECT** - Generates a series of 4 questions dealing with the analysis of photoelectric emission from the surfaces of various randomly selected metallic cathodes.

**TOTAL INTERNAL REFLECTION** - Generates a series of questions dealing with the reflection of light at appropriate interfaces.

**GAS LAW ANALYSIS** - This utility program is designed to solve a large variety of problems in which gases undergo isothermal, isobaric, isobolumic, and general processes.

**OPTICS ANALYSIS** - This utility program is designed to solve a variety of problems involving the image forming properties o thin lenses and convex and concave mirrors.

**PRICE: \$180.00**

**TITLE: PLANETARY MOTION**  
**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Measurements are made of the orbits and periods of different planets orbiting the same star. Tests are made of Kepler's second and third laws. (A simple discussion of Kepler's laws is provided in the laboratory manual.) The stable and unstable orbits of a planet orbiting two stars are also studied. The simulation of these orbits uses Professor Cromer's new approximation, which is sufficiently stable to indefinitely follow a stable three body orbit.

**PRICE: \$95.00**

**TITLE: QUAL**

**PUBLISHERS NAME: MICROPI**

**DESCRIPTION:** This is a simulation of an inorganic laboratory experiment in the identification of ions.

**PRICE: \$150.00**

**TITLE: QUALITATIVE ORGANIC ANALYSIS**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** This program tests students' ability to identify organic compounds. Before answers are given, standard tests can first be performed on the computer and the IR Spectra can be viewed for each unknown. Covers 25 unknowns.

**PRICE: \$75**

**TITLE: QUANTUM ATOM AND SINE WAVES**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** These two programs use color and Hi-Resolution graphics; the first to show the electron cloud, electron movement, and the nucleus; the reaction of two atoms in close proximity is also shown. The other program illustrates the interaction (interference) of sine waves by allowing the student to change frequency, phase, and amplitude.

**PRICE: \$40.00**

**TITLE: SATELLITE TRACKING SOFTWARE**

**PUBLISHERS NAME: SAT. TRAC INTERNATIONAL**

**DESCRIPTION:** SAT TRAC International produces practical scientific software for amateurs, professionals and schools at packaged software prices. These are designed as flexible, highly sophisticated tools which can be operated without special training by anyone with a small, "personal" computer. There are three standard programs POSN (for position), LOOK (For look angles) and OBS (for observation update). With these the user has all the software necessary to find the geographical location of a satellite, find its location in space in relation to his location anywhere on earth and update the satellite's orbital parameters based on a visual or radio (doppler shift) observation. Amateur radio operators can now run a full week's (or more) worth of "Look Angles" (AZ, EL, RANGE) on OSCAR in only a few minutes. Astronomers can easily compute the Right Ascension/Declination of a satellite and quickly acquire it by telescope. Satellite enthusiasts will know where to look for larger satellites at night, with the unaided eye. All that is required for input are orbital parameters for each satellite which are easily available from NASA at no cost. NASA will supply these regularly to any school, individual or organization which will make practical use of the material and not abuse or overload their capability to provide the data. All programs come with UPDATE, a 30-50 satellite data base management program and sample NASA data.

TRAC program plots satellite position on a world map display.  
FORTRAN program series available in listing/card format. New  
manual allows easy conversion to any FORTRAN capable system.  
CUSTOM mode available for day/month and local time output.

**TECHNICAL NOTES**

10 year almanac  
Solar ephemeris for earth shadow calculations  
+2, +5 second accuracy when used properly  
Leap years accounted for  
10 to 50 satellite data base  
Self-test functions  
2nd & 3rd order zonal gravitational effects used  
Double precision not required  
Antenna or telescope could be driven with LOOK AZ/EL output  
Handles synchronous, highly elliptical, and circular orbits  
Generates:

LATITUDE

LONGITUDE

ALTITUDE

RIGHT-ASCENSION

DECLINATION

RANGE

AZIMUTH

ELEVATION

for any time

PAST

PRESENT

FUTURE

**PRICE:** TRAC/UPDATE <<GRAPHICS, \$20.00

POSN/LOOK/OBS/UPDATE, \$25.00

TRAC/POSN/LOOK/OBS/UPDATE, TAPE, \$39.00

TRAC/POSN/LOOK/OBS/UPDATE, DISK, \$45.00

**TITLE: SCATTER - PARTICLES SCATTERING**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** There are three computer programs in the Scatter unit which simulate various systems. The first two give students experience in deducting the size, shape, and force law of a single scattering center from the scattering pattern it produces. The third program simulates the scattering of alpha particles by a metal foil.

The educational aims of Scatter, are to: show students that one can learn about the nature (shape, size, etc.) of an object from the way it scatters particles; increase their understanding of the use of models in physics; and give some appreciation of the work of Rutherford, Geiger, and Marsden.

**PRICE: \$35.00**

**TITLE: SCIENCE**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Fifth graders

This program provides a greater in depth study of the systems of the body, what they do, and how important it is to take proper care of each. How our bodies react to daily living is explained and the student learns to understand "what makes him tick".

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: SCIENCE LAB DATARASE**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** Two separate programs for inventory control; one for



supplies and equipment, and one for chemicals. The latter is designed to take into account the aging and hazard properties of chemicals. Both programs have search, sort, scan, and print routines.

**PRICE: \$40.00**

**TITLE: SCIENTIFIC MEASUREMENTS**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION: CONTENT:** This program offers examples and exercises in reading three instruments found in most science laboratories

(1) Graduated Cylinder

(2) Metric Ruler

(3) Triple Beam Balance

**FORMAT:** The program shows the correct method for reading the amount of liquid in a graduated cylinder, indicating the liquid level should be read at the meniscus bottom. The student is given an example of taking such a reading, and then is invited to do ten exercises. The program computes each successive liquid height randomly. If the student answers incorrectly, he receives a second chance. Should the second try also be incorrect, the correct answer is then provided by the program.

The program follows a similar instructional strategy relative to reading lengths by a metric ruler. Answers are to be given in both centimeters and millimeters.

Several examples are provided to show the student how to correctly balance and read a triple beam balance. The student has the opportunity to complete five exercises in balancing the scale and entering the associated weight. The student has to balance each of the three sections of the balance individually—hundredths, tenths and units.

**USER:** Advanced elementary students...and beyond.

**PRICE:**

**TITLE: SIMPLE MACHINES**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION: COVERAGE:** The six simple machines

(1) Lever

(2) Pulley

(3) Wheel and Axle

(4) Inclined Plane

(5) Wedge

(6) Screw

**REQUISITE:** Fifth grade reading comprehension skills

**OBJECTIVE:** Upon successful completion of the program, the student should be able to select the appropriate simple machine to use to solve any number of real-life applications.

**FORMAT:** Instruction and an illustrative example of an application is presented for each machine.

The student then had an opportunity to work several exercises intended to further reinforce his or her understanding of how each machine can be used.

There are review opportunities throughout the program.

A concluding mastery quiz affords the student a chance to evaluate his or her own basic understanding of the principles and uses that are presented.

**PRICE:**

**TITLE: SOUND**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Sixth graders

The student is introduced to basic concepts in the science of



sound. Examples are given of everyday sound experiences to help the child relate the scientific concept to his/her everyday life. A simple game will encourage the child to learn and recall the information given.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: STATISTICS**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** The computer augments the student's own data with sufficient simulated data to permit the student to make a 100 trial histogram. The computer plots the same histogram for comparison, and then adds 500 more trials. The student measures the average and standard deviation of the 600 trial histogram. Full explanation of the necessary concepts is included in the laboratory manual. (This is an excellent filler experiment because it can be done any time in the school year.)

**PRICE: \$95.00**

**TITLE: TARGET**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Students take turns firing at an enemy, using initial conditions obtained by solving an individualized projectile motion problem. Since the enemy is prepared to fire back, the student must be ready with the answer when he/she gets to the computer. Thus, while some students are working on their problems, others can use the computer to test their results. A direct hit leads to a promotion, but a miss allows the enemy to fire back. A student may be killed in action or retired as a general, depending on skill and a bit of luck. Full records are kept of each student's performance for teacher review.

The three programs of Target give students practice with projectile motion problems of increasing complexity. In addition, within Parts 1 and 2, a wind factor is added once the student reaches a certain rank. Thus, target can be effectively used with students with very different levels of mastery. Furthermore, it can be used over any period of time, since the position of each student, after each shot, is stored on the diskette.

**PRICE: \$95.00**

**TITLE: TELLING TIME**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Second graders

Basic concepts of clock and telling time are introduced. Not only is the traditional clock face used but, with more and more digital clocks and watches being used today, they are included also.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: TELLSTAR**

**PUBLISHERS NAME: INFORMATION UNLIMITED SOFTWARE**

**DESCRIPTION:** Have you ever looked up at the sky and wondered about the heavens? TellStar has the answers. TellStar identifies and locates stars and planets from any place in the world at any time of the day or night. Tell it your location, time and date and TellStar will draw you a high resolution map of the sky. Use your game paddles to locate a star or planet and at the press of a button, TellStar identifies the body with a complete

description of its location and viewing angle. Simple keyboard controls allow you to change the angle of the display.

PRICE: Level one; \$39.00

Level two; \$79.00

**TITLE: THE EARTH AND ITS COMPOSITION**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Third graders

The student is introduced to the basic components that make up the earth on which we live. Water, mountains, air, volcanoes, etc. are explained as are the ways in which they are formed, eroded, changed and "reborn" in other places as "other things". Relationships of one to the other are explained where appropriate.

PRICE: Diskette: \$15.00

Cassette: \$13.00

**TITLE: THE MOSTLY BASIC SCIENTIFIC PROGRAM PACKAGE**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

**DESCRIPTION:** The Mostly BASIC Scientific Program Package has been developed to be an education working package of programs for your microcomputer.

CONSTELLATION 10 is a program which displays 10 common constellations and their names, and then gives a multiple choice test on them. The constellations are displayed by use of asterisks (\*), and the name and pictorial are shown for the demonstration and the test. After the 10 questions are answered, the score is given.

THE SUN is another program which describes and then tests the user's knowledge of the solar system. It lists important facts about the sun, then gives a true/false test. After reviewing the information, the user can take the 10-question test, and the score is given.

HEX TO DECIMAL AND DECIMAL TO HEX CONVERSIONS is a program which will run in any system with 4K BASIC or higher. The program converts a hex number (up to FFF) to its decimal number or a decimal number (up to 65535) to its hex number equivalent.

A simple interface circuit is all that is needed to change your computer into a 24 hour digital clock and timer which will control lights and appliances that are plugged into a power control circuit. The user enters the present time, then the activation and deactivation times. The TIME MACHINE CLOCK continually updates itself, and when the circuit is activated, the computer displays "CIRCUIT ACTIVATED" on the screen. When it reaches the deactivation time, the computer displays the message, "CIRCUIT DEACTIVATED."

An interface circuit also can adapt the computer into a telephone dialer. The BASIC TELEPHONE DIALER program lets the user enter phone number to be made via a shorter access code number. The COMBINATION LOCK program lets the microcomputer accept input of a combination which will activate a control. Among other things, appliances and lights can be turned on and doors or safes can be opened. A foolproof system can be developed by using an external keypad for entering the combination. In this way, any tampering with the program will be prevented.

The WORD BOARD program can be used in two ways, both of which are educational and useful in communications. One system is to assign English words to each of the 26 keys. For the English word covering a key, its French equivalent can be displayed. Of course, this method also works in the reverse order, teaching English to a foreign-speaking operator. The WORD BOARD may also be used as an aid for the handicapped. A word can be assigned

for each key, and by depressing the key, sentences can be communicated much more quickly and easily than by typing whole sentences.

**PRICE: \$29.95**

**SOFTWARE**

**TITLE: THE PLANETARY GUIDE**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Discover the moon and sun, the planets and their orbits, comets and asteroids. Contains Hi-Res graphic displays comparing planet sizes and orbital relationships. Planet movements as well as moon phases are animated. Interesting text and factual tables provide a fascinating education for all ages. All major Solar System members displayed in detail.

**PRICE: \$30.00**

**TITLE: THE SOLAR SYSTEM**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for First graders

The child is introduced to the basic concepts of the planets, the sun, the moon and stars. Simple questions and a matching game are designed to reward the student when the material is mastered.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: THREE BODY ORBITS**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** The motion of three bodies interacting gravitationally is displayed in four different modes. 1. Any two planets (real or fictitious) in orbit around the sun. 2. Any planets and its satellite (real or fictitious) in orbit around the sun: inertial frame. 3. Any planet and its satellite (real or fictitious) in orbit about the sun: rotating frame. 4. General three body orbits. Data on nine planets and thirty-two satellites are stored on the diskette. Excellent for demonstrating retrograde motion, synodic period, perturbation, orbital precession, and Lagrangian points. Manual gives many applications.

**PRICE: \$95.00**

**TITLE: TIME/RATE/DISTANCE**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** The student is drilled separately on distance, time, and rate problems and then takes a final drill on mixed problems. After each response, the true motion is displayed.

**PRICE: \$65.00**

**TITLE: TITRATION**

**PUBLISHERS NAME: MENTOR SOFTWARE, INC.**

**DESCRIPTION:** Simulates typical acid-base titrations as they are performed in high school and college chemistry courses. The student is presented with either a basic or acidic solution of unknown normality. The titration process can be controlled and observed on the screen. Ideal for pre-lab preparation, post-lab discussion or demonstrations. Packages includes user guide materials. High School-College.

**PRICE: \$19.95**

**TITLE: TWO POPULATIONS****PUBLISHERS NAME: COM PRESS**

DESCRIPTION: Interactions between competing or predator prey populations using the Lotka-Volterra Equation.

**PRICE: \$50.00****TITLE: VECTORS****PUBLISHERS NAME: EDUTECH**

DESCRIPTION: Students calculate the direction in which an airplane must fly to reach a specified point, given the magnitude and direction of the cross wind. Calculations are done away from the computer, allowing many students to participate simultaneously. When a student has an answer, the computer will simulate it. With limited fuel and treacherous mountains, calculational errors have disastrous results.

**PRICE: \$95.00****TITLE: WAVE MOTION****PUBLISHERS NAME: EDUTECH**

DESCRIPTION: Students measure the speed, wavelength, and frequency of various traveling sine waves. A study is then made of the superposition of several waves, with emphasis on superpositions that produce beats, standing waves, and the first few terms of a Fourier series. Standing waves are studied further by observing the superposition of two sine waves traveling in opposite directions.

**PRICE: \$95.00****TITLE: WEATHER FRONTS****PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

DESCRIPTION: Provides an introduction to the concepts of weather fronts, their structure and nature. Concepts presented include front characteristics, frontal movement, and the weather associated with different kinds of fronts. Color cross-sectional diagrams illustrate cold, warm, and occluded frontal structures. An ideal introduction to this concept for high school and college students.

**PRICE: \$24.95****TITLE: WEATHER- A LESSON-TUTORGRAPH****PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

DESCRIPTION: Introduces concepts of weather fronts, their structure and nature using programmed material with branching, review and test, full color hi-res illustrations, and teaching manual.

**PRICE: \$24.95****TITLE: ZEBRA FINCH GENETICS****PUBLISHERS NAME: AMERICAN AVICULTURAL ART & SCIENCE, INC.**

DESCRIPTION: Over 40000 possible combinations of classification chart and phenotypes. Zebra Finch- Int BASIC low-resolution graphic display of 10 sample Zebra Finch color distributions.

**PRICE: \$15.00**



## SOCIAL STUDIES

**TITLE: AKAN****PUBLISHERS NAME: EDUTEK CORP.**

**DESCRIPTION:** An African name program. Do you know on which day of the week you were born?... "AKAN" can tell you, and give you your Akan day-name.

This program is an excellent device for motivating a study of calendars--some student always asks a question such as "How does the program know that May 10, 1972 was a Wednesday?"

**PRICE: \$20.00****TITLE: AMERICAN HISTORY THROUGH BIOGRAPHIES****PUBLISHERS NAME: RIGHT ON PROGRAMS****DESCRIPTION:** Program for Fourth Graders

Names of famous Americans are introduced with a brief fact or two about each. Period of Pilgrims, Colonial America and Westward Movement are covered. Vocabulary and matching game complete program.

**PRICE: Diskette: \$15.00****Cassette: \$13.00****TITLE: AMERICAN INDIANS****PUBLISHERS NAME: RIGHT ON PROGRAMS****DESCRIPTION:** Program for Fifth graders

Students will be introduced to the various Indian tribes and the sections in the United States in which they lived. The students will learn new vocabulary and the ways of life of the American Indians. They will also learn about all the things the Indians taught the new Americans and how they helped the new American survive in this country.

**PRICE: Diskette: \$15.00****Cassette: \$13.00****TITLE: CAI PROGRAM VOLUME II****PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** EUROPEAN MAP - Identify counties and their capitals. MUSIC COMPOSING AID - Make and play your own music on the Apple. No additional hardware required. Includes a sample from Bach's Tocatta & Fugue in D minor.

**METFOR MATH** - Learn math skills by destroying menacing meteors.

**PRICE: \$11.95****TITLE: CAI PROGRAMS VOLUME I****PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** U.S. MAP - helps students learn the names of the fifty states by providing a map of the United States to fill in the correct name.

**SPELLING TEST** - This program keeps track of the words missed and gives a score.

**MATH DRILL** - Tests skills in addition, subtraction, multiplication, and division.

**ADD-WITH-CARRY** - A tool for teaching addition of two and three place numbers. This program has adjustable levels.

**PRICE: \$11.95 cassette****\$24.95 disk****TITLE: COMPUTER LAB IN MEMORY AND COGNITION****PUBLISHERS NAME: CONDUIT**

DESCRIPTION: Computer Lab in Memory and Cognition allows students to participate as subjects in some of the most significant experiments, rather than merely reading about experimental procedures and results, students gain a deeper understanding of the basic phenomena of cognitive psychology. In addition, some of the programs provide simulations of experiments based on well-known models from the literature, demonstrations of models, or both. Because these simulations and demonstrations provide results for the same tasks that the students perform, students can compare their own results with this data and better evaluate the theories behind the experiments. The programs thus provide a dynamic, hands-on approach to the paradigms and theories of cognitive psychology.

The package for Computer Lab in Memory and Cognition consists of an instructor manual, a student manual, and ten main programs. The programs are grouped into five topic areas, and each area constitutes a separate chapter in both the instructor and student manuals. Although the chapters are written so as to integrate these topics and thus provide a coherent view of the memory system, they are also sufficiently independent that an instructor can choose among them.

The five topic areas of the package include: levels of processing (2 experiments), encoding specificity (3 experiments), semantic memory (1 experiment, 2 simulations, and 1 demonstration), and constructive processes in prose comprehension (3 experiments). These topics were selected to represent a broad spectrum of current work in cognitive psychology. They are also the areas in which considerable theoretical and empirical process has been made in recent years.

The programs in this package are available in standard BASIC or micro versions. The standard BASIC programs are easy to implement, as they do not require tachistoscopic presentation rates, single-user computers, or special display devices with cursor addressability and screen erase. Rather, they can be implemented on a campus time-sharing system, and the only special requirement is the ability to measure response time. The micro version programs require no special equipment or timers.

Neither the standard BASIC nor micro versions of the programs assume previous experience with computers, so that students need only be taught how to log on to the computer and access the programs. The programs themselves present step-by-step instructions for the experiments, complete with sample trials, and allow the student to repeat these instructions whenever necessary.

The programs are thus extremely convenient for the instructor to use. Students generally do not need to be supervised with the package, and after the first week they run the programs outside of class, freeing classtime for more in-depth discussion of the data and theories. In addition, all but one of the programs allow for the student's individual data to be sorted in a common class data file. The programs then operate on this class file to calculate summary statistics, namely means and variances. This frees the instructor from the time-consuming tasks of collecting each student's data, tabulating all the data, and calculating statistics by hand.

The student manual for Computer Lab in Memory and Cognition is written to stand independent of a textbook. Each chapter presents a fairly complete background on the theories and research that gave rise to the original experiment. These background sections not only set the stage for the students' experiment but also show the evolution of theories and the interplay of research findings behind current theories.

Each chapter also contains a series of discussion questions. The questions encourage and guide the student to evaluate current competing theories by using the results of the class study as

well as the results of the original experiment. Inferential statistics are not required for these questions; the student is simply asked to examine the means. However, variances and sample sizes are provided in the class summary output, in addition to the means for each dependent variable, allowing those students who know statistics to use them.

Each chapter ends with an evaluation of the impact that the experiment and theory have had on the field; this section also discusses directions for future research.

The first experiment in the package, LOPl, addresses the effects of depth of processing on memory. In the encoding phase, students are required to respond yes or no to three different kinds of encoding questions: structural, rhyme, and semantic.

The structural task is assumed to induce processing at a fairly shallow level. It requires subjects to evaluate the pattern of consonants (C) and vowels (V) in a word. For the sample question "IS A CCVVCC?", for instance, the word SPEECH would yield a positive response and the word COPPER a negative response. The rhyme task requires subjects to evaluate the sound pattern of the word, e.g., "RHYMES WITH CLAIM?", and is assumed to induce deeper processing than the structural task. The semantic task is assumed to involve the deepest level of processing. It requires subjects to determine whether a word is an instance of a given conceptual category, e.g. "IS A TYPE OF WEAPON?"

The program presents 60 of these encoding trials in random order. An unexpected recognition memory test then follows the trials. The 60 target words and 60 distractors are presented one at a time, and the student must respond with yes or no, according to whether or not the word was shown during the prior encoding phase.

At the end of the experimental session, the program presents a summary of the individual's data. The subject is then given the options of adding the data to the class data file and of summarizing the class file.

Typically, recognition performance in LOPl is highest for items encoded under the semantic task and lowest for items encoded under the structural task. Students are especially impressed with this result when it is viewed in light of the encoding times, which are generally longest for the structural task and shortest for the semantic task. The results clearly illustrate that it is not the amount of study time that determines how well an item is remembered, but rather the qualitative nature of the study time as defined in terms of depth of processing.

Anyone who can read and follow directions can participate as a subject in the experiments of this package; even fifth-graders have run the experiments successfully. The difficulty of the package, of course, lies in interpreting the data, understanding the theories, and understanding the relationship between the theories and the data. Thus, because several levels of interpretation are possible, the package can be used in several different courses, including cognitive psychology (undergraduate and first year graduate), human memory, and human experimental psychology. The programs in the package can also be used in introductory psychology courses to illustrate experimental methods; however, the level of theory and discussion questions presented in the student manual may be beyond many beginning psychology students.

**PRICE:**

**TITLE: DEMO-GRAPHICS**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** The issues of population growth and the relationship between population and food, and energy and environmental issues



receive worldwide attention today. One of the major problems facing educators, policy makers, and government planners is how to meaningfully communicate the complexities of population dynamics. DEMO-GRAPHICS is a research and educational tool that, through flexible and creative computer-assisted programs, addresses itself to this communication problem.

The DEMO-GRAPHICS programs, developed by the Population Dynamics Group at the University of Illinois, and supported by a grant from the National Science Foundation, can be used to help teach demographic concepts and applications to students in sociology and other social sciences, including geography, public administration, and health education. The programs can be used to: (1) present current and projected population data for many nations, assuming no change in demographic rates; (2) allow projections of national populations for a variety of different demographic dynamics and the impact of both real and simulated factors on the growth of populations in the world.

The materials are suitable for college students who are beginning to learn the outlines of the population/resource relationship, as well as for graduate students who are ready to attempt computer simulations to test hypotheses about the effects of various demographic variables on the population structure. Many high school students have also used the programs with success. Any social science course that includes an introduction to demographic facts can benefit from using the package, particularly because it can aid in the exploration of causes of demographic facts or conditions.

The programs are easy to use and are self-teaching, that is, the instructions for using the programs are, for the most part, internal to the programs and are presented as the student uses the program. A minimum of preparation time is required for classroom use; a fifteen-minute introductory demonstration is usually sufficient to familiarize either students or instructors with the system. The User's Manual gives complete directions and explicit examples illustrating many applications of the programs. The instructor may use these examples (as well as others available from the Population Dynamics Group) to structure teaching units varying from one to five hours long.

The Apple II program includes 1980 data on population, fertility and mortality, for the world, the United States, and representative countries from each continent including the USSR and China. Space is also available to add up to three new countries at the user's discretion. The user may also modify the data to reflect recent changes or estimates of present and future fertility and mortality values.

The following four programs are included in the Apple II version of the package:

**Introduction.** This lesson introduces the two types of graphs used in the other programs. The lesson defines the labels on the graphs and total fertility rate, life expectancy, and infant and child mortality.

**Bar Graph Projection.** This program displays in graphic form the age composition of a country in five-year age groups. The population may be projected forward in any multiple of five years.

**Linear Population Projection.** In this program total population or any subgroup is projected forward for a given number of years. The student specifies the population (the total population or the population subgroup) and the number of years to project forward (a multiple of five between ten and 100).

**General Purpose Program.** Using this program, the student can project the growth of any item that is related to population (total or subgroup). The student indicates the item to project (for example, houses or doctors), whether the item is related to



total population or a subgroup, the number of items per 1,000 people, and a cost for the item if desired. The program will plot: (1) projected growth in the number of items; (2) the cost of the item; (3) the annual increase in numbers; or (4) the annual increase in cost.

The sample screens below illustrate the two types of graphs used for displaying the data.

**PRICE:**

**TITLE: EARLY CIVILIZATION**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Sixth graders

The student is introduced to early Greek and Roman civilization. Famous names and places are given with information about them.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: ECOLOGICAL MODELING**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** Introduces the student to some techniques for modeling ecological systems and processes on the computer. By controlling certain parameters, such as initial population size, growth rate, time length of the simulation, and others, the student experientially tests hypotheses and predicts results from ecosystems.

The program Epop calculates population size at a sequence of time intervals for a population in exponential growth. This program differs from others in this series in that the analytical solution for the differential equation of exponential growth is used. The student enters values for the initial population and growth rate and the program calculates and reports back the population and growth rate and the program calculates and reports back the population size for ten time cycles. The question at the end of the chapter challenge students to understand and identify the limitations of this model's approach.

The program Expop makes computations by a brute force method called incremental addition. With this method, population growth increments are calculated by algebraic difference equations over short periods of time. Each increment is added to the existing population, and this incremented population is then used to calculate the next growth increment. This provides a simple method for the solution of complex differential equations that are not solved readily by analytical methods. Though simple, the method is time-consuming and is only practical with a computer program. The student specifies four conditions: initial population, growth rate, number of time units to compute, and the interval of computation. The program calculates and reports the population size for ten time cycles. Following his use of the program, the student is led to compare results from Expop and Epop to determine advantages of each method of computation.

Sigpop is a simulation of the sigmoid, or logistic, growth model which describes the behavior of a population whose growth stops and density fluctuates around some value related to the population's environment. Has the advantages of combining parameters describing the exponential growth characteristics of a population and the carrying capacity of the environment. Describes only the growth characteristics of a population responding to negative density-dependent factors; it does not explain the actual causes of regulation, and it makes many assumptions about population structure. The solution to the logistic equation is effected by difference equations. The student is challenged to vary the parameters of the model to test

effects of the results.

Rand-K, a logistic model of population growth, provides a conceptual tool for understanding growth from a lower level up to some limit of the environment. Provides a tool for understanding population responses to changes in the carrying capacity and helps students interpret how populations are stabilized after they reach carrying capacity. One may view the expression  $(K-N)/K$  in the logistic model as a density-dependent response. It provides a varying accelerating and braking effect on growth which could represent the net effect of density-dependent factors such as competition and predation.

Competition is a potent force in regulating ecological systems, both in terms of direct regulatory effects on component populations and in shaping the evolutionary modifications leading to specializations and niche differentiation. Compet-1 provides students with a model to simulate these effects based on the classic Lotke-Volterra equation. Using incremental addition it calculates the population size of two competing species in successive time steps using data from within the program. The student enters values for the initial population size, growth rate, environmental capacity, and fraction of overlap for each population, and the number of time periods to simulate and the interval of computation. The program reports back the size of each population for the number of periods specified by the student. An Compet-5 provides a more realistic model of interspecific competition by two factors not included in Compet-1; (1) a randomly varying carrying capacity operating independently on the two species; and (2) a mechanism for permitting emigration and immigration. Emigration and immigration are modeled to occur in proportion to the difference between carrying capacity and the current population. If this difference is positive, immigration will occur; if negative, emigration will occur.

Tundra simulates the energetic relationships of an arctic tundra ecosystem. This system was chosen because of its apparent structural simplicity and because it has been studied rather extensively. By modeling such a simple system with its relatively small number of interactions, the most important relationships can be induced and applied to larger, more complex systems. Provides an exploratory step into the complex and intricate problems of modeling exosystems. The exosystem and how its units are programmed in BASIC are explained in detail to give the students direct exposure to modeling and to provide them with modeling skills in their continuing studies of ecology.

PRICE: \$65.00

**TITLE: ECOLOGY SIMULATIONS 1**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** STERL- Allows you to investigate the effectiveness of two different methods of pest control- the use of pesticides and the release of sterile males into a screw-worm fly population. The concept of a more environmentally sound approach versus traditional chemical methods is introduced. Demonstrates the effectiveness of an integrated approach over either alternative by itself.

**POP-** The POP series of modes examines three different methods of population projection, including exponential, S-shaped or logistical, and logistical with low density effects. At the same time the programs introduce the concept of successive refinement of a model, since each POP model adds more details than the previous one.

**TAC-** Simulates the tagging and recovery method that is used by scientists to estimate animal populations. You attempt to

estimate the bass population in a warm-water, bass-bluegill farm pond. Tagged fish are released in the pond and samples are recovered at timed intervals. By presenting a detailed simulation of real sampling by "tagging and recovery," TAG helps you to understand this process.

**BUFFALO-** Simulates the yearly cycle of buffalo population growth and decline, and allows you to investigate the effects of different heard management policies. Simulations such as **BUFFALO** allow you to explore "what if" questions and experiment with approaches that might be disastrous in real life.

**PRICE: \$24.95**

**TITLE: FLECTORAL COLLEGE**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION:** Illustrates the workings of the Electoral College System in the United States. Users actually simulate presidential elections, selecting their own candidates and estimating their likelihood of winning on a state by state basis. Graphic and numerical results are shown. A wide range of options is available.

**PRICE: \$24.95**

**TITLE: HAIL TO THE CHIEF**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** Your object in this simulation is to be elected president. In your campaign you set your strategy and carry it out week by week. You may run TV or magazine ads, travel to different states, hold news conferences and participate in a debate.

You must take a position on ten campaign issues such as Energy Policy, Unemployment, Taxes, Mid-East Policy and Strategic fund raising efforts to business, labor and mass direct mail solicitations.

The package includes four models of varying complexity; each can be used at ten levels of difficulty. The more complex models introduce the influences of incumbancy, campaign finance and spending limits.

Hail to the Chief has been used as a teaching aid in Political Science, Voting Behavior and Computer Science at the University level since 1976.

**PRICE: \$24.95**

**TITLE: HISTORY AND GEOGRAPHY PACKAGE**

**PUBLISHERS NAME: MICRO LEARNINGWARE**

**DESCRIPTION:** Regions of U.S. A drill and practice exercise where the user is asked what region of the United States randomly selected states are located in.

States & Capitals. This program drills the student on randomly selected states and their capitals. If the student does not know the capital, the computer offers clues to help determine the capital.

Presidents. A drill and practice on presidents of the U.S. Questions such as who was 26th president, what president left office in 19xx, what president took office in 18xx, and so on.

Country. A drill and practice on countries and the continents they are located in.

Revolutionary War Quiz. Two players compete in answering questions on the revolutionary war.

**PRICE: \$24.95**



**TITLE: HOLIDAYS AND FESTIVALS**  
**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Second graders  
This program will talk about the national holidays celebrated in this country (with a little basic information about similar holidays in other countries). Vocabulary, games, customs, and gifts will be included. A matching game will "test" student's recall of the information given.

**PRICE: Diskette: \$15.00**  
**Cassette: \$13.00**

**TITLE: MEDALIST-CONTINENTS**  
**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** This program operates in the same manner as the States program. Multiple levels of clues may be presented to the student. The student must buy clues to guess the continent.

**PRICE: \$39.95**

**TITLE: MEDALIST-PRESIDENTS**  
**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** A program with similar structure to the States/Continents programs, but with hundreds of facts about our Presidents.

**PRICE: \$39.95**

**TITLE: MEDALIST-STATES**  
**PUBLISHERS NAME: HARTLEY COURSEWARE, INC.**

**DESCRIPTION:** The objective of this program is to help students learn information about the STATES. In using the program, a student tries to guess the name of a state by 'buying' clues. Easy clues such as shape, nickname, etc., are very expensive.

Difficult clues such as entrance into the Union, major agricultural exports, etc., are very cheap!

The student may compete with his/her old score, or may "challenge the Medalists". The Medalists are the three students who have the best scores.

There are multiple levels of clue difficulty. The clues within a level are randomly presented to the student. This provides a continued challenge and requires the three Medalists to be familiar with all of the information to maintain their rating.

The teacher CAN CHANGE THE CLUES.

The computer stores all students' records for the teacher or for "self-challenge" but shows only the three best players to other challenging students.

High resolution graphics.  
**PRICE: \$39.95**

**TITLE: MEET THE PRESIDENTS**  
**PUBLISHERS NAME: VERSA COMPUTING, INC.**

**DESCRIPTION:** An educational game presenting the forty U.S. Presidents. Famous computer artist Saul Bernstein has created 39 full-color portraits.

Features a variety of spectacular Hi-Res display routines, which gradually reveal a Presidential portrait. The player is given



clues and must type in the correct President's name. When this is accomplished, the portrait is fully revealed and computer music is played. Points are tallied for the player's speed in identifying the Presidents.

The Slide Show will display the Hi-Res portraits without the quiz game. Another feature is the ability to change the game clues.

**PRICE: \$39.95**

**TITLE: POPULATION**

**PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

**DESCRIPTION:** Projections of world and USA populations based upon various growth rates are used to stimulate class discussions. A simulation of the game of LIFE is also provided on this disk. Life is based upon the Scientific American articles that illustrate the factors that may control the stability of population and life.

Junior to Senior high level studies. The brief program, Birthday, will show the probability of people having the same birthday.

**PRICE: \$24.00**

**TITLE: PRESIDENT ELECT**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** Duplicates every major electoral factor to make it the most accurate and realistic model of the campaign process ever made. You can contest any election from 1960-1984 using actual historical candidates or ones you make up. The computer reflects the political climate of the period chosen based on the prevailing economic factors and U.S. and foreign news. On the 9-week campaign trail, you must allocate your money among key-state, regional and national advertising. Campaign stops must be planned to avoid fatigue. This is a three player game representing the Republican, Democratic and third-party candidates. The computer can play any or all three positions.

**PRICE: \$39.95**

**TITLE: SEX ROLE**

**PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**

**DESCRIPTION:** Are you androgynous? This program helps you to examine your nature, behavior and attitudes in light of society's changing concept of sex roles.

**PRICE:**

**TITLE: SHORE FEATURES- A LESSON-TUTORGRAPH**

**PUBLISHERS NAME: TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE**

**DESCRIPTION:** To acquaint students with geographical features of the shore/beach area of the coast using programmed material with branching and review and tests, full color hi-res illustrations and teaching manual.

**PRICE: \$24.95**

**TITLE: SOCIAL AND ECONOMIC SIMULATIONS**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** LIMITS- A microcomputer version of the well known "Limits to Growth" project done by the Club of Rome. It contains a model of a world that is built of five subsystems (population, pollution, food supply, industrial output, and resource usage) linked together by six variables: birth rate, death rate, pollution generation, resource usage rate, industrial output

growth rate, and food production rate.

**MARKET-** Allows two or more people to play the roles of companies who are competing for the market for a particular product. Each player makes marketing decisions quarterly including the production level, the advertising budget, and the unit price of the product for his company.

**USPOP-** Allows the user to study many aspects of the United States' human demography (population change) including population growth, age and sex distribution. "USPOP" makes population projections and investigates the consequences of many different demographic changes.

**PRICE: \$24.95**

**TITLE: SOCIAL STUDIES**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** The child is introduced to the basic concepts of farms, farm animals and products raised on farms. Student is then asked a series of matching questions designed to show that he/she has understood the information given.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: STATES OF THE UNITED STATES**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Fifth graders

This program provides basic, background information on the United States. How many there are, how many we started with, largest, smallest, states famous for certain things, and more. Series of matching questions creates a game the student enjoys playing and is challenging enough to make the student want to "keep trying" until he/she gets all the answers right.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**

**TITLE: THE ALIVENESS LIFE DYNAMIC**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Deals with self-transformative experiences about life-awareness, feelings, aliveness, rationality, etc. Centers upon the following 3 games. The Primal Oil Field, The Keys to Awareness and Rationality? Totally unique, hi-res, shape tables. Adds up to a "workshop" on all the major facilitators of, and barriers to, aliveness.

**PRICE: \$15.95**

**TITLE: THE CONDITIONING LIFE DYNAMIC**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Deals with self-transformative experiences about conditioned values, responses, attitudes, beliefs, motivations. Contains the following: The Conditioning Box, Conditioning (you program the mice your way- they'll remember up to 200 steps), A shocking Predicament (applies conditioning to life), Docking in Space, and The Wheels of Misfortune. Adds up to a workshop on conditioning, positive and negative reinforcement, etc. Hi-res and shape tables, conditioning game vocabulary card.

**PRICE: \$15.95**

**TITLE: THE ENVIRONMENT LIFE DYNAMIC**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Deals with self-transformative experiences about

differentiating between a positive and negative environment, etc. The major part of the disk concerns these 4 unique games: Lightning Bugs (be quick or you won't catch them), Moon-Catcher (space colony building), Turn 'Em Loose! (let caged animals loose but don't let the zookeeper catch you). Jungle Safari (a wild shape-table extravaganza of wild animals and jungle with lots of action). All Hi-Res, shape table, includes game vocabulary card.

PRICE: \$15.95

**TITLE: THE LIFE DYNAMIC TRANSFORMATION EXPERIENCE**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** A disk of interconnected programs that creates space for insights in 10 different life areas, such as responsibility, sexuality, relationships, etc. Games such as Shoot Your Stuff allows you to play shooting gallery and take pot-shots at the 5 weakest areas in your life. Other games included as well.

PRICE: \$15.95

**TITLE: THE MIDDLE AGES**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Sixth graders

The student is introduced to the basic historical facts dealing with that time period. Political and economic "facts of life" are covered. A game and series of questions encourage the student to learn.

PRICE: Diskette: \$15.00

Cassette: \$13.00

**TITLE: THE RELATIONSHIP LIFE DYNAMIC**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** 2 games. In Elevator, you choose which floor your Hi-res man in an elevator will get off on, according to what "solution to a relationship problem" is printed on that floor. (The "problems" are printed on the other side of the elevator). A man gets off on the floor you choose and then Hi-res people demonstrate what this problem is really about. In Relatopoly, you get to throw Hi-res dice and play "monopoly" about relationships.

PRICE: \$15.95

**TITLE: TRANSPORTATION**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Second graders

A brief history of transportation will be given with the emphasis on "how they got where they were going and how long did it take to get there". The program then brings the student to the present time, showing various types of transportation, how important each one is and what each is responsible for.

PRICE: Diskette: \$15.00

Cassette: \$13.00

**TITLE: TRUCKER AND STREETS OF THE CITY**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** STREETS OF THE CITY- This simulation is modeled on Grand Rapids, Michigan, a metropolitan area with a population of 550,000. The budgeting, cost and work standard bases are derived from actual experiences of the city over the past five years. The objective of the simulation is to complete a ten-year plan of



street and transit improvements while retaining the support of a majority of the City Commission.

During your tenure, you must construct streets and Interstate highways, repair existing streets, and improve traffic safety. For the Transit Authority you have to upgrade and replace a delapidated bus fleet, increase ridership, reduce maintenance downtime and improve on-schedule performance.

Other factors to be considered are operating tax levels, construction bonding and labor negotiations. The simulation provides a substantial challenge and it is both educational and entertaining.

TRUCKER- Simulates coast-to-coast trips by an independent trucker hauling various cargos. The user may haul oranges, freight or U.S. mail. All have different risks and rewards. Maximum profit comes from prudent risk-taking. If all goes well, you can obey the speed limits, stop for eight hours of sleep each night and still meet the schedule. Bad weather, road construction or flat tires may put you behind schedule. You may try to increase your profit by skimping on sleep, driving fast or carrying an overweight load. Other factors are choice of routes, truck payment, fuel, food, tolls, and fines.

**PRICE: \$24.95**

#### SOFTWARE

**TITLE: WORLD AND STATE CAPITALS**

**PUBLISHERS NAME: AMERICAN AVICULTURAL ART & SCIENCE, INC.**

**DESCRIPTION:** Consists of a 100 World Nation/Capital and a 50 U.S. State/Capital test. Both tests display low-resolution graphics which animate dripping square-dots to fill the shape of Capital building.

Features a simple single-key stroke answering system. This eliminates the standard use of the return key. The program was designed to eliminate teacher's supervision and encourage student's spelling accuracy, knowledge of the U.S., and the world. The score results are retrievable for teacher's use. In addition, teacher can produce his or her test, using same features and format for up to 100 questions.

**PRICE: \$25.00**

**TITLE: WORLD CLOCK**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** Daylight and darkness can be seen on the globe at any time of the day and year chosen by the user. The globe display will continue to run as a real-time clock. Introduction shows and explains planets' relationship to sun and each other. A demonstration displays the sun's effect on the world through one year, focusing on summer and winter solstice periods and spring equinox. Explanations and color graphics are interesting and easy to understand for students of all ages.

**PRICE: \$40.00**

**TITLE: WORLD POLAR/DESERT REGIONS**

**PUBLISHERS NAME: RIGHT ON PROGRAMS**

**DESCRIPTION:** Program for Third graders. Student is introduced to basic, background information on the particular climate region of the world. Animals that live in that climate are discussed as are birds, trees and flowers if appropriate. Series of matching questions provides game which is fun and checks student's retention of material.

**PRICE: Diskette: \$15.00**

**Cassette: \$13.00**



# ENGINEERING

APPLEPIPS	EN-1
BEAMS	EN-1
CADAPPLE	EN-1
CHIP	EN-1
CIRCUIT ANALYSIS	EN-2
CIRCUIT DESIGNER AND SIMULATOR	EN-2
CONBEAM	EN-3
COORDINATE GEOMETRY	EN-3
DATA MANAGER FOR WEATHER OBSERVATIONS	EN-4
DESIGNER'S TOOLKIT	EN-4
DIF FILE CONVERTER	EN-4
DWGLIST	EN-4
ELECTRIC "BREADBOARD"	EN-5
ELECTRICAL ENGINEERING II	EN-5
ELECTRICAL ENGINEERING SERIES	EN-5
ELECTRONIC DESIGN FOR THE APPLE	EN-6
ELECTRONICS 1	EN-7
ELECTRONICS 2	EN-8
ELECTRONICS 3	EN-8
ENERGY AND ENVIRONMENT	EN-8
ENGINEERING APPLICATIONS OF COMPUTER GRAPHICS	EN-8
ENGINEERING MATHEMATICS-1	EN-8
FIELD NOTE DATA REDUCTION	EN-9
FORECASTING GROUP	EN-9
FOURIER ANALYZER	EN-9
FRAME ANALYSIS ON MICROCOMPUTERS	EN-10
GRADE BEAM ON ELASTIC FOUNDATION ANALYSIS	EN-10
GROUP VELOCITY DEMONSTRATIONS	EN-10
HORIZONTAL CURVE STAKING	EN-10
HURRICANE TRACKING PROGRAM	EN-10
HYGROMETER PROGRAM	EN-11
ISOLATED FOOTING DESIGN	EN-11
LOGIC SIMULATOR	EN-11
MCAP: A MICROCOMPUTER CIRCUIT ANALYSIS PROGRAM	EN-11
MENTOR (ELECTRONIC DESIGN FOR THE APPLE)	EN-11
MICROCOMPUTER AIDED DESIGN OF ACTIVE FILTERS	EN-13
MICROCOMPUTER CIRCUIT ANALYSIS	EN-14
MISCELLANEOUS IE APPLICATIONS GROUP	EN-14
MODEM PROGRAM	EN-14
MOMENT OF INERTIA & ELEMENT OF TRIANGLE	EN-15
OP-AMP DESIGN	EN-15
OPERATIONS RESEARCH MODELS GROUP	EN-15
PIER AND GRADE BEAM DESIGN	EN-16
PLANT LAYOUT GROUP	EN-16
POLE EMBEDMENT DESIGN	EN-16
PRODUCTION CONTROL GROUP	EN-16
QUALITY CONTROL AND RELIABILITY ANALYSIS GROUP	EN-17
RETAINING WALL DESIGN	EN-17
SCIENCE AND ENGINEERING PROGRAMS	EN-17
SOLAR ENERGY FOR THE HOME	EN-18
SOLGAIN	EN-18
SPECSYSTEM	EN-18
SPUR GEARS	EN-20
STADIA REDUCTION	EN-20
STATICS ON MICROCOMPUTERS	EN-20
STRESS & STRAIN ON MICROCOMPUTERS	EN-20
SUNHEAT 1	EN-20
SUNOP	EN-21
SUNPAS	EN-21
SUNSIM-2	EN-22
SUNSIM-3	EN-22
SUNSIM-4	EN-22

SURVEYOR'S AIDE . . . . .	EN-23
T-SQUARE . . . . .	EN-23
TEK-PAK . . . . .	FN-23
TEMPERATURE CONTROL PROGRAM . . . . .	EN-23
TEMPSENSE TEMPERATURE MONITORING SYSTEM . . . . .	EN-23
TFA (TRANSFER FUNCTION ANALYZER) . . . . .	EN-25
THREE MILE ISLAND SPECIAL EDITION . . . . .	EN-25
TOPOGRAPHIC . . . . .	EN-25
TSWING . . . . .	EN-26
UNI-SOLVE . . . . .	EN-27
WIND ENERGY CALCULATIONS . . . . .	EN-27
WOOD HEAT-1 . . . . .	EN-27
WORK MEASUREMENT GROUP . . . . .	EN-27

**TITLE: APPLEPIPS****PUBLISHERS NAME: THE TELESYS GROUP, INC.**

**DESCRIPTION:** APPLEPIPS 1.0 is a complete image processing system designed particularly for remote sensing research and education. The system contains the full complement of eight sophisticated image processing functions, culminating with an iterative parallel pipelined classification algorithm. In addition to two copies of the system software (one provided for 'back-up'), and the user's manual, the package includes two LANDSAT images on APPLEPIPS disks, ready for analysis.

The APPLEPIPS user's manual is actually two documents. The first is a tutorial written by Dr. F.J. Gunther, and it is designed to lead the new user through a typical image processing investigation. The second document is a reference manual covering each of the packages and options contained in the APPLEPIPS Version 1.0 system.

**PRICE: \$495.00****TITLE: BEAMS****PUBLISHERS NAME: COMPUTER HOUSE DIV/FLC, INC.**

**DESCRIPTION:** Calculates the stress and deflection on any beam if given the beam dimensions, length, support conditions, and load conditions. Also it can computer the correct American standard I beam if given the length, support, and load conditions and maximum allowable deflection.

**PRICE: \$115.00****TITLE: CADAPPLE****PUBLISHERS NAME: T & W SYSTEMS, INC.**

**DESCRIPTION:** The CADAPPLE has been popular since its release in May. In addition to educational users, we're surprised to see a large number of industrial users choose the CADAPPLE such as companies that do drafting for: electronic packaging, electric heat tracing, architectural and facility layout. The CADAPPLE is the lowest cost entry-level system on the market and provides a risk free way to "tryout" CAI although it is slower than the T-SQUARE and has less screen resolution.

The next release of CADAPPLE will include options for hard disk and two screens (one for text and one for graphics) as well as modifications to speed-up operation. Some additional T-SQUARE features will also be transferred to the CADAPPLE.

**PRICE:****TITLE: CHIP****PUBLISHERS NAME: LAMAR INSTRUMENTS**

**DESCRIPTION:** A new program for the APPLE II computer that will be a help to all engineers, technicians and hobbyists that work with integrated circuits. Tired of searching through manual after manual looking for the pinout on that obscure chip that you are about to use in that trick circuit you have in mind? Forgot the truth table on an exclusive nor gate? Well then "Chips is just the program for you! Written out of necessity by Paul Lamar, owner of Lamar Instruments, "Chips" contains pinouts and truth tables, where applicable, for over 100 TTL and CMOS integrated circuits. Any one of these pinouts and truth tables is displayed on the cathode ray tube in less than three seconds after hitting return. "Chips" is able to do this amazing feat by utilizing the high speed 6502 machine language search routines built into the APPLE II disk operating system. In a commercial environment the "Chips" program pays for itself in several weeks.

New pinouts and truth tables are easily added to the existing list using examples provided in the program. "Chips" is available on floppy disc for the APPLE II or the APPLE II PLUS directly from them.

**PRICE:**

**TITLE: CIRCUIT ANALYSIS**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Lets you modify and improve your circuits as much as you want without picking up a soldering iron.

Whether you design circuits for profit or pleasure, Circuit Analysis allows you to quickly adapt AC or DC circuits to your required specifications.

This program:

- \* calculates the effect of individual components on an entire circuit so you can zero in on the most significant parts when experimenting with changes;
- \* shows which components' tolerances are most critical to the success of a circuit so you'll know exactly where it's safe to economize;
- \* allows you to plot data using the Frequency Analysis option so you can instantly visualize your circuit's performance;
- \* lets you redefine output nodes so you can easily run any of the program's tests using any suitable output.

In order to use Circuit Analysis, you must first diagram your circuit, substituting equivalent subcircuits as necessary. You then assign numbers to each part and node. Using the Made A New File option, enter this positional data along with values and tolerances for the components up to 60 parts and 30 nodes for an AC circuit; 80 parts and 40 nodes for a DC circuit.

The Circuit Analysis program's Nominal Output option helps you determine the nominal voltage gain, output level, and phase shift of your circuit at a given frequency. The Frequency Response option provides a complete check. Circuit Analysis will list up to 30 frequency steps in increments of your choice, then offer you the option of seeing the information displayed graphically. Part Effects & Worst Case will alert you to exactly how each component is affecting your circuit, and the possible results if they all performed at the negative limits of their tolerances. The Optimize a Part option will vary a specific component's value to produce the voltage gain, output level, or phase shift you request. Trial Run & Test Limits provides statistical analysis of a circuit's performance under assembly line conditions telling you what the test limits should be for one percent reject rate.

**PRICE: \$40.00**

**TITLE: CIRCUIT DESIGNER AND SIMULATOR**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** A professional design tool, this product was created to enhance the productivity of electronics design by providing an interactive drawing and simulation system, allowing the engineer to quickly design and predict the performance of a circuit without having to actually build it.

This software product enables the user to:

- \* Draw an electronic circuit diagram directly on the CRT screen.
- \* Run a time-domain simulation of the circuit responding to user-defined input sources.

It's like building a breadboard and hooking up signal sources and a couple of scope probes to see what happens...except that it's faster.

Circuit diagrams are drawn directly on the screen using the



Designer program. Using the keyboard you move the drawing cursor around on the screen adding or deleting components. Each time you add a component the system draws the component at the cursor position. Drawing interconnecting lines and contacting circuit nodes using the PLOT and CONTACT commands allows you to create any type of circuit diagram. Completed circuit diagrams are then saved in a diskette file.

When the drawing is complete the INPUT program prepares the equations needed for the simulation. That program creates (and allows you to edit if you wish) the Network listings.

Components are specified in a network in one of two ways:

- A. By their parametric value - Resistors, Inductors, Capacitors, Batteries.
- B. By their type number -- all other components.

Category B Components are called STANDARD COMPONENTS.

You can define and use in any given network up to 5 different types of each Standard Component. For example, you may use more than 5 OP AMPS in a given network, but you can only use a maximum of 5 different types.

The Standard Components Library contains the parametric values for each of the 5 types of each of the 7 Standard Components. They are kept in a special disk file and can be edited by the user at any time.

Following preparation of network equations, you can run a simulation using the SIM program. The program enables you to retrieve any network file, specify simulation parameters and run a time domain (transient analysis) simulation. You can monitor any 2 nodes in the network and have their voltage plotted as a function of time. You can also create printer plot equivalents. If you wish to monitor more than 2 nodes during a simulation, you can printout a tabular listing.

**PRICE: \$259.95**

**TITLE: CONBEAM**

**PUBLISHERS NAME: TECHNICAL SOFTWARE**

**DESCRIPTION:** Calculates reactions, shears, and moments at the tenth points of each span of multispans continuous beams. Both numerical and graphical output of moments and shears are displayed. Number of spans and degree of indeterminacy are limited only by RAM capacity (A 32K Apple II will handle 15 spans). The easy to use LOAD commands allows virtually any loading situation to be quickly code and run. The 3 LOAD commands allow the user to:

- 1) Apply a point load anywhere on any span
- 2) Apply a uniform load on any span
- 3) Apply a general trapezoidal load distribution anywhere on any span

Loads on any span can vary from no load to any combination of loads. Three types of supports can be specified: Fixed, pinned or cantilevered. Each span is given a moment of inertia and modulus of elasticity. A matrix analysis program based on the displacement method for continuous beams, written by structural engineers. Program includes a sample problem.

**PRICE: \$44.95 Cassette**

**\$49.95**

**TITLE: COORDINATE GEOMETRY**

**PUBLISHERS NAME: DISCO TECH.**

**DESCRIPTION:** Performs comprehensive variety of calculations for geometric layout, including area, intersections, curve design; much more. Allows point location or creation (11 ways); provides area data (3 ways); lets you enter bearings four ways. Double-

precision, 15-digit accuracy. Stores 4,549 points (or more, depending on your system). Displays and prints results.  
**PRICE: \$600.00**

**TITLE: DATA MANAGER FOR WEATHER OBSERVATIONS**

**PUBLISHERS NAME: CLIMATE ASSESSMENT TECHNOLOGY, INC.**

**DESCRIPTION:** New microcomputer software is available to store and analyze weather observations from your home, farm, school, or local airport station. It allows simple entry of daily temperatures and precipitation amounts which are stored, then summarized. Routines in the software produce tables and graphs showing accumulated excesses or deficits, departures from normal, and extremes observed etc.

Current weather can be compared with that of any year since 1951 utilizing data from the user's local area contained in the software package. This data base is continually updated as owners add their observations.

A maximum-minimum thermometer and rain gauge are also available for anyone who wishes to purchase them with their software.

**PRICE: \$59.95**

**TITLE: DESIGNER'S TOOLKIT**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Designer's Toolkit is a program for the Apple II that computerizes the drafting table. Emulating pen, pencil, and brush on paper, Designer's Toolkit and the Apple Graphics Tablet let the user generate graphics for mapping, architecture, and drafting. The Designer's Toolkit offers color selection, image size modification capabilities, and print fonts, features that make it a highly versatile program for the professional designer.

**PRICE: \$225.00**

**TITLE: DIF FILE CONVERTER**

**PUBLISHERS NAME: STRAWBERRY TREE COMPUTERS**

**DESCRIPTION:** Converts temperature data stored on the disk to a format that can be read by VisiCalc.

**PRICE:**

**TITLE: DWGLIST**

**PUBLISHERS NAME: MICRO ASSOCIATES**

**DESCRIPTION:** Designed specifically for engineers and contractors to provide a means of developing and maintaining drawing indexes. Most engineering and construction jobs today can be defined by their required list of drawings. Managers using "DWGLIST" can clearly define the scope of the project to both their staff and clients. This program provides the means for efficiently keeping track of drawing numbers to avoid duplication. "DWGLIST" also allows quick reference to the latest drawing revisions to insure that the latest designs are being followed.

Drawing indexes are stored on disk files by project. Each disk can contain up to eighty projects and as many as 4000 drawing records associated with them. Individual records contains the user's drawing number, client drawing number, revision number and estimated issue date, actual issue date and comments. Two reports may be obtained at any time from the stored data. A master drawing index of all projects on the disk and a Project Drawing Index listing all drawings with associated data for a select project in numerical order by the user's drawing number.

**PRICE: \$350.00**

**TITLE: ELECTRIC "BREADBOARD"****PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Electric "Breadboard" is a super package which is capable of analyzing AC and DC circuits similar to systems used on large university mainframes. The software applications package allows Apple II computers to simulate circuit board "breadboarding."

The user can create the circuit, install the components and define the circuit pathways with a special text processor that makes up part of the system. The system can recognize and analyze the existence of resistors, capacitors, transistors, FET's, voltage sources, current sources and operational amplifiers within the circuit.

The user can input 15 or more nodes with up to 50 branches within the circuit analysis. The system generates the node voltages for a single node or a group of nodes.

**PRICE: \$150.00****TITLE: ELECTRICAL ENGINEERING II****PUBLISHERS NAME: POWERSOFT, INC.**

**DESCRIPTION:** Electrical Engineering II is the second in a series of Electrical Engineering packages designed to cover the broad spectrum of EE with handy general purpose SUB-programs with higher than normal usage levels. The programs in this package are:

- 1) Reactance Chart
- 2) Series Resonant Circuits
- 3) Parallel Resonant Circuits
- 4) Computing the Impedance of a Ladder Network
- 5) T-Attenuator Networks
- 6) Pl-Attenuator Networks
- 7) Wye-Delta/Delta-Wye Transformations
- 8) Minimum Loss Pad Matching
- 9) Pl Network Impedance Matching
- 10) Passive Band Pass Filter Design
- 11) Passive Butterworth Low Pass Filter Design
- 12) Active Filter Low Pass Design
- 13) Active Filter High Pass Design

**PRICE: \$14.95****TITLE: ELECTRICAL ENGINEERING SERIES****PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** LOGIC SIMULATOR: Simulate your digital logic circuits before you build them, CMOS, TTL, or whatever, if it's digital logic, this program can handle it. The program is an interactive, menu driven, full-fledged logic simulator capable of simulating the bit-time by bit-time response of a logic network to user-specified input patterns. It will handle up to 1000 gates, including NANDS, NORs, INVERTERS, FLIP-FLOPS, SHIFT REGISTERS, COUNTERS and user defined MACROS. Up to 40 user-defined, random or binary input patterns. Simulation results displayed on CRT or printer. Accepts network descriptions from keyboard or from printer. Accepts network descriptions from keyboard or from LOGIC DESIGNER for simulation.

LOGIC DESIGNER: Interactive PI-RES Graphics program for designing digital logic systems. A menu driven series of keyboard commands allows you to directly draw on the screen up to 10 different gate types. Standard patterns supplied are NAND, NOR, INVERTER, EX-OR, T-FLOP, JK-FLOP, RS-FLOP, and N-BIT SHIFT REGISTER. User interconnects gates just as you would normally draw using line graphics commands. Network descriptions for

LOGIC SIMULATOR generated simultaneously with the CRT diagram being drawn. Drawing is done in pages of up to 77 gates.  
PRICE: \$259.00

**TITLE: ELECTRONIC DESIGN FOR THE APPLE**

**PUBLISHERS NAME: KORSMEYER ELECTRONIC DESIGN**

**DESCRIPTION:** It's been a long time coming, but it's finally here! Free yourself from the tedious and time consuming calculator calculations involved with the design of electronic circuits. The following are a list of the calculations supported in the package.

- OHM'S Law Formulas (find any variable)
- DC Power Formulas (find any variable)
- Kirchhoff's Voltage Law
- Kirchhoff's Current Law
- Total Resistance (up to 10 resistors)
- Total Capacitance (up to 10 capacitors)
- Charge Stored in a Capacitor
- Energy Stored in a Capacitor
- For Voltage Across Series Capacitors
- Total Inductance (up to 10 inductors)
- Voltage Regulation

Capacitive Reactance

Inductive Reactance

- Impedance and Phase Angle for Resistance & Inductance in Series
- Impedance and Phase Angle for Resistance & Capacitance in Series
- Impedance and Phase Angle for Inductance & Capacitance in Series
- Impedance and Phase Angle for Resistance & Inductance in Parallel
- Impedance and Phase Angle for Resistance & Capacitance in Parallel
- Impedance and Phase Angle for Resistance, Inductance, & Capacitance in Series
- Impedance and Phase Angle for Inductance & Capacitance in Parallel
- Impedance and Phase Angle for Resistance, Inductance & Capacitance in Parallel
- Impedance and Phase Angle for Inductance & Series Resistance in Parallel with Resistance
- Impedance and Phase Angle for Inductance & Series Resistance in Parallel with Inductance & Series Resistance

Mutual Inductance

- Coupled Inductance of Inductance in Parallel (with Fields Aiding)
- Coupled Inductance of Inductance in Parallel (with Fields Opposing)
- Coupled Inductance of Inductance in Series (with Fields Aiding)
- Coupled Inductance of Inductance in Series (with Fields Opposing)
- Coupling Coefficient for 2 Inductively Coupled Coils
- Energy Stored in an Inductor
- Q of a Coil where Resistance & Inductance are in Series
- Q of a Capacitor where Resistance & Capacitance are in Series
- Q of a Capacitor where Resistance & Capacitance are in Parallel
- Resonance
- Admittance of a Series Circuit
- Susceptance of a Series Circuit
- Power Factor
- Average, RMS, Peak, & Peak-Peak Conversions
- Time Constants (on charge or discharge)
- Transformer Formulas

Constant - K Lowpass T - Section Filter



Constant - K Lowpass L - Section Filter  
Constant - K Lowpass PI - Section Filter  
Constant - K Highpass T - Section Filter  
Constant - K Highpass L - Section Filter  
Constant - K Highpass PI - Section Filter  
Constant - K Bandpass Filter  
Constant - K Bandreject Filter  
Series M - Derived Lowpass T - Section Filter  
Series M - Derived Lowpass L - Section Filter  
Series M - Derived Lowpass PI - Section Filter  
Series M - Derived Highpass T - Section Filter  
Series M - Derived Highpass L - Section Filter  
Series M - Derived Highpass PI - Section Filter  
Shunt M - Derived Lowpass T - Section Filter  
Shunt M - Derived Lowpass L - Section Filter  
Shunt M - Derived Lowpass PI - Section Filter  
Shunt M - Derived Highpass T - Section Filter  
Shunt M - Derived Highpass L - Section Filter  
Shunt M - Derived Highpass PI - Section Filter

(VACUUM TUBE FORMULAS)

Amplification Factor  
AC (Dynamic) Plate Resistance  
Mutual Conductance (Transconductance)  
Gain of an Amplifier Stage

(TRANSISTOR FORMULAS)

Input Resistance  
Current Gain  
Voltage Gain  
Output Resistance  
Power Gain  
Alpha (Current Gain of the Common-Base Configuration)  
Beta (Current Gain of the Common-Emitter Configuration)  
To find (Alpha) with Beta given, or to find (Beta) with Alpha given

Impedance of a Coaxial Line  
Attenuation of a Coaxial Line  
Impedance of a Parallel Conductor  
Percent of Amplitude Modulation  
Side Band Power of an A-M Carrier  
Total Radiated Power  
Percent of Modulation in an F-M Carrier  
Modulation Index of an F-M Carrier  
Number of Decibels corresponding to a given power ratio  
Number of Decibels corresponding to a given voltage or current when the impedances across which the signals are being measured are equal.  
Number of Decibels corresponding to a given voltage or current when the impedances across which the signals are being measured are unequal.  
High-Resolution graphics representations of all the filter circuits are shown.

**PRICE: \$99.95**

**TITLE: ELECTRONICS 1**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

DESCRIPTION: 5 Programs - Zener Diode Voltage Regulator Design. 555 Timer Design (monostable and astable circuits). Transistor Bias Parameters. Single-Stage Transistor Amplifier Design. Heat Sink Selection and Design.

**PRICE: \$24.95 Cassette**

**\$29.95 Disk**

**TITLE: ELECTRONICS 2**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

**DESCRIPTION:** 7 Programs--4 Quadrant Arctangent Function, Rectangular/Polar Conversion and Complex Number Mathematics. Minimum and Maximum Values of an Array. Roots of Polynomials with Real Coefficients. Inverse Laplace Transforms of a Transfer Function. Solution of Simultaneous Equations with Real and Complex Coefficients.

**PRICE: \$24.95 Cassette**

**\$29.95 Disk**

**TITLE: ELECTRONICS 3**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

**DESCRIPTION:** 8 Programs - Average and RMS Values of a Periodic Function. Fourier Series Expansion of a Periodic Function. Fourier Transform and Spectrum Plot. Analysis of Damped Oscillations. Impedance Matching Pads. PI-TEE (delta-wye) transforms.

**PRICE: \$24.95 Cassette**

**\$29.95 Disk**

**TITLE: ENERGY AND ENVIRONMENT**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** This material is intended for use in courses dealing expressly with environmental problems, or as supplementary material in traditional physics or physical science courses.

Emphasis is on physical principles, model formulation, and quantitative solutions, with the computer used in an interactive mode for instruction and calculation. Essential introductory material studies the tools of quantitative reasoning, including concepts of rates of change and functional dependencies.

The program:

**PROFILE-** Calculation stable age distributions for stationary and growing populations using U.S. mortality statistics (1967).

**POPULATE-** To simulate a dynamic population, allowing the user to enter appropriate population statistics or use those for the United States.

**ABSORB-** Calculates the earth surface temperature for various carbon dioxide concentrations using one-layer model of atmosphere with simple absorption.

**GLACIER-** Solves Pudyko's model (Tellus, 1969). Shows latitude dependent temperature for changes of solar constant albedo varies from .32 to .62 depending on temperature.

**PRICE: \$65.00**

**TITLE: ENGINEERING APPLICATIONS OF COMPUTER GRAPHICS**

**PUBLISHERS NAME: KERN PUBLICATIONS**

**DESCRIPTION:** A collection of programs for microcomputers showing typical applications of computers and computer graphics to engineering: structural mechanics, dynamics, heat transfer, fluid flow, systems analysis, computer-aided-design. Bridges the gap between computer science and engineering applications.

**PRICE: \$28.50 book with program listings**

**\$19.95 program disk**

**TITLE: ENGINEERING MATHEMATICS-1**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Contains eight programs useful to the engineer:

**EN-8**

1. Solving Simultaneous Equations
2. Evaluation of a Polynomial
3. Quadratic Equations
4. Integration by Simpson's Rule
5. Newton-Raphson Roots
6. Derivative of a Function
7. Factorial of a Given Number
8. Extended Factorial Calculation.

**PRICE: Tape \$14.95**

**TITLE: FIELD NOTE DATA REDUCTION**

**PUBLISHERS NAME: DISCO TECH.**

**DESCRIPTION:** Reduces survey field data; closes traverse; balances by compass, transit, or Crandall method; rotates bearings; transforms coordinates; makes temperature and slope corrections; stores points on disk; permits input data correction; much more. Double-precision, 15-digit accuracy. Displays and prints results.

**PRICE: \$500.00**

**TITLE: FORECASTING GROUP**

**PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: WINTER'S MODEL FOR FORECASTING**

This model uses the popular Winter's approach for forecasting time series. The model includes trends and seasonal factors of the data. The program considers both quarterly and monthly data and will give a year's forecast of the series in question. The analyst has the option to specify appropriate smoothing factors for use within the Winter's model.

**PROGRAM 2: EXPONENTIAL SMOOTHING**

This program applies single, double, and triple exponential smoothing to a time series of data. It calculates a measure of effectiveness to tell which of the models has the most appropriate fit. The program allows the user to vary the weighting factor used in the model.

**PROGRAM 3: MULTIPLE REGRESSION**

This program handles the classical multiple regression problem with one dependent variable subject to a number of independent variables. The program allows the user to introduce various independent variables to identify different dependent variables.

**PROGRAM 4: DETERMINATION OF THE SMOOTHING FACTORS FOR THE FORECASTING MODEL**

This program provides a search procedure which will allow the industrial engineer to determine the best weighting factor in time-series forecasting models. Ordinarily the IE is asked to estimate the value of the weighting factor which he feels most appropriate. This model will help the industrial engineer determine this value by comparing the performance of various weighting factors on a historic series.

**PRICE:**

**TITLE: FOURIER ANALYZER**

**PUBLISHERS NAME: DYNACOMP, INC.**

**DESCRIPTION:** Use this program to examine the frequency spectra of limited duration signals. The program features automatic scaling and plotting of the input data and results. Practical applications include the analysis of complicated patterns in such fields as electronics, communications and business.

**PRICE: \$14.95, Cassette \$18.95, Diskette**

**TITLE: FRAME ANALYSIS ON MICROCOMPUTERS**

**PUBLISHERS NAME: KERN PUBLICATIONS**

**DESCRIPTION:** Theory and program listings in BASIC for analysis of 2-dimensional rigid frames using matrix methods. Graphical output shows displaced geometry. A good way to learn how to write your own structural software.

**PRICE: \$39.95 book with program listings**  
**\$19.95 program disk**

**TITLE: GRADE BEAM ON ELASTIC FOUNDATION ANALYSIS**

**PUBLISHERS NAME: DISCO TECH.**

**DESCRIPTION:** Accurately predicts grade beam foundation performance, based on as many as 99 point loads and 99 analysis points. Calculates grade beam deflection and slope, bending moment, shear, and soil pressure. Displays and prints results.

**PRICE: \$220.00**

**TITLE: GROUP VELOCITY DEMONSTRATIONS**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** Of the many microcomputer-based units CONDUIT has reviewed, this demonstration of wave phenomena stands out from all others in its effective use of the medium. The program generates striking animated displays of wave motion that capture the user's interest immediately, and provokes a series of "What if?" questions that lead naturally into the exercises presented in the Student Guide.

In this package, students study traveling waves of the form  $y = \cos(\omega t - kx)$  where  $y$  is the vertical amplitude,  $\omega$  is the angular frequency,  $t$  is the time,  $k$  is the wave number, and  $x$  is the horizontal position.

The Student Guide describes in detail how students can use the program to illustrate wave group phenomena and experimentally verify basic relationships. The guide concludes with a discussion of several natural wave phenomena exhibiting group velocity effects, and presents a number of related exercises for the student.

**PRICE: \$45.00**

**TITLE: HORIZONTAL CURVE STAKING**

**PUBLISHERS NAME: DISCO TECH.**

**DESCRIPTION:** Given the instrument station, delta angle, and curve radius, calculates and prints data needed to lay out a circular curve in the field. You may stake curve from BC or EC; locate instrument on a line offset from the centerline; much more. Printout included BC, EC, radius, delta angle, tangent, curve length, offset, deflected and turned angles.

**PRICE: \$175.00**

**TITLE: HURRICANE TRACKING PROGRAM**

**PUBLISHERS NAME: CLIMATE ASSESSMENT TECHNOLOGY, INC.**

**DESCRIPTION:** Microcomputer software is now available for tracking hurricanes and tropical storms in the Caribbean Sea and the Gulf of Mexico. The program allows for each reported position of a storm to be input then computations are made to determine the category of intensity, speed of movement, distance from any potential point of landfall, and several other parameters. A plotting routine shows the U.S. Gulf coast with successive positions of a storm's track.



Also included in the software are several files containing data for classic hurricanes which have struck the U.S. Gulf coast. Their tracks can be displayed to provide analogs for new storms.  
**PRICE: \$29.95**

**TITLE: HYGROMETER PROGRAM**

**PUBLISHERS NAME: STRAWBERRY TREE COMPUTERS**

**DESCRIPTION:** This program turns the Dual Thermometer into a hygrometer which displays humidity and dew point as well as temperature. It includes all the display, storage, and alarm features of the Dual Thermometer program. Humidity and dew point are calculated from wet and dry probe temperatures. A fan (not included) ventilates one probe which is kept wet. Useable from minus 55 degrees to 100 degrees C (minus 67 to 212 degrees F) and from 0 to 100% relative humidity. Special procedures are required below freezing. One probe cover and cloth wick included.

**PRICE: \$35.00**

**TITLE: ISOLATED FOOTING DESIGN**

**PUBLISHERS NAME: DISCO TECH.**

**DESCRIPTION:** Interactively designs continuous footings with a continuous concrete or masonry wall and square or rectangular isolated footings supporting a concrete, masonry, or metal-base column. Lets you compare various materials. Displays and prints results.

**PRICE: \$110.00**

**TITLE: LOGIC SIMULATOR**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** SAVE TIME AND MONEY. Simulate your digital logic circuits before you build them. CMOS, TTL, or whatever, if it's digital logic, this program can handle it. The program is an interactive, menu driven, full-fledged logic simulator capable of simulating the bit-time response of a logic network to user-specified input patterns. It will handle up to 1000 gates, including NANDS, NORs, INVERTERS, FLIP-FLOPS, SHIFT REGISTERS, COUNTERS up to 20 user-defined random, or binary input patterns. Accepts network descriptions from keyboard or from LOGIC DESIGNER for simulation.

**PRICE: \$159.95**

**TITLE: MCAP: A MICROCOMPUTER CIRCUIT ANALYSIS PROGRAM**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Performs a linear voltage, impedance or transfer impedance analysis of an electronic circuit. The program calculates, lists, plots the circuit's frequency response, and analyzes circuits with up to 15 nodes. Larger circuits can be analyzed individually. All circuit elements are entered in DATA statements.

**PRICE: \$24.95**

**TITLE: MENTOR (ELECTRONIC DESIGN FOR THE APPLE)**

**PUBLISHERS NAME: KORSMEYER ELECTRONIC DESIGN**

**DESCRIPTION:** High-Resolution graphics representation of all circuits are shown:

- OHM's Law Formulas (find any variable)
- DC Power Formulas (find any variable)
- Kirchhoff's Voltage Law

- Kirchhoff's Current Law
  - Total Capacitance (up to 10 capacitors)
  - Total Resistance (up to 10 resistors)
  - Charge Stored in a Capacitor
  - Energy Stored in a Capacitor
  - For Voltage Across Series Capacitors
  - Total Inductance (up to 10 inductors)
  - Voltage Regulation
- 
- Capacitive Reactance
  - Inductive Reactance
  - Impedance and Phase Angle for Resistance & Inductance in Series
  - Impedance and Phase Angle for Resistance & Capacitance in Series
  - Impedance and Phase Angle for Inductance & Capacitance in Series
  - Impedance and Phase Angle for Resistance & Inductance in Parallel
  - Impedance and Phase Angle for Resistance, Inductance, & Capacitance in Series
  - Impedance and Phase Angle for Inductance & Capacitance in Parallel
  - Impedance and Phase Angle for Resistance, Inductance & Capacitance in Parallel
  - Impedance and Phase Angle for Inductance & Series Resistance in Parallel with Resistance
  - Impedance and Phase Angle for Inductance & Series Resistance in - Parallel with Capacitance
  - Impedance and Phase Angle for Capacitance & Series Resistance in - Parallel with Inductance & Series Resistance
  - Mutual Inductance
  - Coupled Inductance of Inductance in Parallel (with Fields Aiding)
  - Coupled Inductance of Inductance in Parallel (with Fields Opposing)
  - Coupling Coefficient for 2 inductively Coupled Coils
  - Energy Stored in an Inductor
  - Q of a Coil where Resistance & Inductance are in Series
  - Q of a Capacitor where Resistance & Capacitance are in Series
  - Q of a Capacitor where Resistance & Capacitance are in Parallel
  - Resonance
  - Admittance of a Series Circuit
  - Susceptance of a Series Circuit
  - Power Factor
  - Average, RMS, Peak, & Peak-Peak Conversions
  - Time Constants (on charge or discharge)
  - Transformer Formulas
  - Constant-K Lowpass T-Section Filter
  - Constant-K Lowpass L-Section Filter
  - Constant-K Lowpass PI-Section Filter
  - Constant-K Highpass T-Section Filter
  - Constant-K Highpass L-Section Filter
  - Constant-K Highpass PI-Section Filter
  - Constant-K Bandpass Filter
  - Constant-K Bandreject Filter
  - Series M-Derived Lowpass T-Section Filter
  - Series M-Derived Lowpass L-Section Filter
  - Series M-Derived Lowpass PI-Section Filter
  - Series M-Derived Highpass T-Section Filter
  - Series M-Derived Highpass L-Section Filter
  - Series M-Derived Highpass PI-Section Filter
  - Shunt M-Derived Lowpass T-Section Filter
  - Shunt M-Derived Lowpass L-Section Filter
  - Shunt M-Derived Lowpass PI-Section Filter

- Shunt M-Derived Highpass T-Section Filter
- Shunt M-Derived Highpass L-Section Filter
- Shunt M-Derived Highpass PI-Section Filter  
(VACUUM TUBE FORMULAS)
- Amplification Factor
- AC (Dynamic) Plate Resistance
- Mutual Conductance (Transconductance)
- Gain of an Amplifier Stage  
(TRANSISTOR FORMULAS)
- Input Resistance
- Current Gain
- Voltage Gain
- Output Resistance
- Power Gain
- Alpha (Current Gain of the Common-Base Configuration)
- Beta (Current Gain of the Common-Emitter Configuration)
- To find (Alpha) with Beta given, or to find (Beta) with Alpha given
- Impedance of a Coaxial Line
- Attenuation of a Coaxial Line
- Percent of Amplitude Modulation
- Side Band Power of an A-M Carrier
- Total Radiated Power
- Percent of Modulation in an F-M Carrier
- Number of Decibels corresponding to a given power ratio
- Number of Decibels corresponding to a given voltage or current when the impedances across which the signals are being measured are equal.
- Number of Decibels corresponding to a given voltage or current when the impedances across which the signals are being measured are unequal.

PRICE: \$124.95

**TITLE: MICROCOMPUTER AIDED DESIGN OF ACTIVE FILTERS**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Here's a set of eight programs that will appeal to all electronics buffs. Included for each program is a schematic drawing and a printout.

**ACTIVE BANDPASS FILTER** - A simple design that can be fabricated with a 741 operational amplifier. When the program runs, it requests the center frequency, bandwidth, and magnitude of the gain in the passband.

**STATE VARIABLE BANDPASS FILTER** - Calculates the component values required for a state bandpass filter.

**MULTIPLE FEEDBACK BANDPASS FILTER** - Requires the use of only one operational amplifier and only five other passive components.

**WIEN BRIDGE NOTCH FILTER** - Calculates component values and allows entry of the nearest standard value.

**TWIN TEE NOTCH FILTER** - Calculates the problem of flexibility by using a capacitance multiplier in which the effective capacitance can be adjusted with a potentiometer.

**ACTIVE LOW-PASS FILTER** - Uses a conventional operational amplifier instead of a FET input and produces nine different circuit designs for the same parameters.

**FET INPUT ACTIVE LOW-PASS FILTER** - Allows the user to enter in component values that are available and close to those desired. Component values are then used to calculate the others. If a value is not of the proper value, the program will instruct the user to select another value.

**BUTTERWORTH-THOMPSON LOW-PASS FILTER** - Takes the component values and calculates the real corner frequency,  $Q$  gain, and  $MU$ . The user can change any or all component values to see what effect the change will have on the circuit design.



PRICE: \$16.95

**TITLE: MICROCOMPUTER CIRCUIT ANALYSIS**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Anyone who has had to work for several hours calculating the frequency response of a circuit will appreciate this linear electronic circuit analysis program.

Performs a linear voltage, impedance or transfer impedance analysis of an electronic circuit. The circuit description is entered in a systematic nodal notation and the program then calculated, lists, and plots the circuit's frequency response.

The program will analyze circuits with up to 15 nodes. Larger circuits can usually be divided into subsections which can be analyzed individually.

All circuit elements are entered in DATA statements. Because of this, you can make additional runs with minor circuit changes simply by editing the appropriate line. MCAP enables you to analyze any or all of the six types of circuit components: resistors, capacitors, inductors, bipolar transistors, field-effect transistors (FETs) and operational amplifiers (Op-Amps).

You'll spend less time calculating the response of a circuit and more time designing your own circuits. Educators will find this a strong applications program for circuit analysis.

PRICE: \$24.95

**TITLE: MISCELLANEOUS IE APPLICATIONS GROUP**

**PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: SAFETY STOCK AND EOQ ANALYZER**

This program will allow the industrial engineer to interactively determine the impact of various safety stock and EOQ levels for particular inventory situations. Thus the I.E. can determine the safety stock and EOQ which best meets his level of service or cost criteria.

**PROGRAM 2: RISK ANALYSIS**

This is an engineering economy technique which allows the I.E. to determine a probabilistic estimate of returns on investment. The inputs to the models will be three cost estimates and these will then be converted into an appropriate probability distribution.

**PROGRAM 3: DETERMINATION OF THE OPTIMUM NUMBER**

**OF MACHINES PER OPERATOR**

This program will determine the cost associated with assigning multiple machines to a single operator and will determine the least cost assignment considering machine downtime and the salary of the operator.

**PROGRAM 4: MACHINE CONTROL ANALYSIS**

This program will calculate the effect of machine dominance on a particular machine controlled cycle. The program will then use traditional work measurement techniques to calculate the appropriate allowance for workers in this environment.

PRICE:

**TITLE: MODEM PROGRAM**

**PUBLISHERS NAME: STRAWBERRY TREE COMPUTERS**

**DESCRIPTION:** Enables the Dual Thermometer to use a modem to sound an alarm or report the temperature over the phone. Calls may be initiated by the program at preset temperatures or times. You may setup as many as eight different temperature levels on each probe at which a phone call will be initiated. It can dial up to three different telephone numbers and communicate with another



computer or human. You may also call the computer and get a temperature report. Includes all the temperature display and storage capabilities of the Dual Thermometer program. Uses the Hayes Micromodem II.  
**PRICE: \$29.00**

**TITLE: MOMENT OF INERTIA & ELEMENT OF TRIANGLE**

**PUBLISHERS NAME: AMERICAN AVICULTURAL ART & SCIENCE, INC.**

**DESCRIPTION:** Contains 56 physical formulas for 22 various bodies of mass. Calculates dimension, choice of mass or inertia on selected axis. Intended for engineers who never considered these important factors.

The Element of Triangle program contains 3 major triangles (right triangle, equilateral triangle and general triangle), and its 23 formulas, it calculates sides, angles, altitude, area and radius of inscribed circle simultaneously to find force and directions. We combined both programs in a single disk for interactive use with Moment Of Inertia.

Each formula is essential to any detail engineer, physic student, scientific field engineer, or estimator of dynamic object dimensions.

The Menu program will display all formulas and Definition program will define all details you need.

Both programs utilize touch-key selection input system, which eliminates use of return key, but recognizes characters or initial (abbreviation) of known elements to find its formula and provides missing variables. Instruction includes more than 100 commonly used industrial materials.

**PRICE: \$40.00**

**TITLE: OP-AMP DESIGN**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** For those who design circuits employing operational amplifiers, this program will provide the necessary values for your design and will also suggest appropriate op-amp types. It provides you with a choice of six op-amps and then asks you for design information. Based upon this information, the program will determine if your selection of an op-amp will be acceptable within your chosen parameters. If it is, the values of the required resistors will be calculated along with the input and output impedance, the output signal level, and the power dissipation. It will also confirm that these are within the ability of your op-amp choice. If the op-amp you choose will not work, you have the option to change the specifications or let the computer choose another op-amp. All workable op-amps are then listed, so you can make a second choice and the program will continue to completion.

**PRICE: \$16.95**

**TITLE: OPERATIONS RESEARCH MODELS GROUP**

**PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: LINEAR-PROGRAMMING**

This program uses the Simplex Method to solve linear programming problems. The program allows interactive input of the constraints and the objective function. The approach is effective in solving "small" linear programming problems.

**PROGRAM 2: MAXIMUM FLOW ANALYSIS**

This program solves the classical maximum flow analysis problem, a technique used to model a number of industrial engineering optimization problems.

**PROGRAM 3: INVENTORY MODELS**

This program calculates the economic order quantity under various assumptions such as limited space, limited capital, purchase model, and manufacturing model.

**PROGRAM 4: QUEUEING MODELS**

This system allows the industrial engineer to determine the expected number of individuals waiting and the utilization of servers for various waiting line models such as the finite queues, multiple server, or limited source models.

**PRICE:**

**TITLE: PIER AND GRADE BEAM DESIGN**

**PUBLISHERS NAME: DISCO TECH.**

**DESCRIPTION:** Designs pier and grade beam foundations. Given pier depth and/or steel area. Calculates maximum span, pier depth, steel area, and sheer steel. Conforms with ACI. Displays and prints results.

**PRICE: \$150.00**

**TITLE: PLANT LAYOUT GROUP**

**PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: CRAFT**

This program will apply the traditional CRAFT method of plant layout for small facilities. It will determine the placement of work centers to minimize the cost of travel.

**PROGRAM 2: CORRELAP**

This program will apply the traditional CORRELAP procedure to determine the "Best" departmental arrangement in a small facility.

**PROGRAM 3: OPTIMAL LOCATION OF A NEW FACILITY**

This program will determine the best place to locate a single warehouse, machine or other facility amongst existing items. The program will minimize the cost of traveling between the existing facilities and the new facility.

**PROGRAM 4: PLANT LAYOUT EVALUATION**

This program will evaluate the status of a production plant layout arrangement against producing a number of products with varying quantities, and processing sequence. Program evaluates the layout with respect to proximity between departments, and suggest where improvements should be made.

**PRICE:**

**TITLE: POLE EMBEDMENT DESIGN**

**PUBLISHERS NAME: DISCO TECH.**

**DESCRIPTION:** Determines minimum embedment depth for constrained and nonconstrained laterally-loaded poles, using iterative methods for greatest accuracy. Displays and prints results.

**PRICE: \$80.00**

**TITLE: PRODUCTION CONTROL GROUP**

**PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: CREW SIZE ANALYZER**

This program determines the appropriate number of servers to assign to a service situation using queueing analysis. Applications include the number of tool clerks or machine operators to assign to a particular situation. The program includes the cost of serving and the cost of waiting. The decision on the optimum number of servers is based upon an

expected cost per time period. It is also possible to perform a sensitivity analysis with this program to determine the stability of your answer.

**PROGRAM 2: ASSEMBLY LINE BALANCE**

This program applies a SOMSOAL approach to iteratively solve the assembly line balancing problem which can be described by a precedence diagram of activities. The program attempts to minimize the number of work stations and the time assigned to the work station with the maximum time assigned. This program applies a heuristic technique which provides solutions approaching optimality.

**PROGRAM 3: LINE OF BALANCE**

This program identifies various key points on a Gantt chart and allows input of data regarding the number of units that have passed each point on the time sequence diagram. The model then determines the likelihood of meeting the schedule in consideration of the work performed to date.

**PROGRAM 4: SETUP TIME SEQUENCING**

This program allows the industrial engineer to analyze production facilities capable of making a variety of products and to determine the sequence of jobs which will minimize overall set up costs. This is a heuristic approach using the COMSOAL approach.

**PRICE:**

**TITLE: QUALITY CONTROL AND RELIABILITY ANALYSIS GROUP**

**PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: ANALYSIS OF SAMPLING PLANS**

This program will determine the probability of making a correct or incorrect decision if a specific proposed sampling plan is used. The program will consider various sampling plans and allow the IE to input assumptions regarding the likelihood of defective parts.

**PROGRAM 2: QUALITY CONTROL ANALYSIS**

This program will calculate the control limits on X-Bar and R-Charts and other appropriate charts for data supplied.

**PROGRAM 3: MAINTENANCE POLICY ANALYSIS**

This program will simulate the effect of using various maintenance and replacement policies available for various items such as tools, which can fail in service.

**PROGRAM 4: RELIABILITY SYSTEMS**

This program will allow the industrial engineer to draw a diagram of a redundant parallel and series systems and will calculate the reliability of such systems.

**PRICE:**

**TITLE: RETAINING WALL DESIGN**

**PUBLISHERS NAME: DISCO TECH.**

**DESCRIPTION:** Designs concrete or block stemwall. Base designed interactively. Prints full-formatted analysis for each foot of height, soil pressures, etc., ready to submit for approval.

**PRICE: \$250.00**

**TITLE: SCIENCE AND ENGINEERING PROGRAMS**

**PUBLISHERS NAME: OSPORNE/MCGRAW HILL**

**DESCRIPTION:** Written to help researchers use computers to perform the tedious, repetitive calculations often required in their work, this book is a collection of over 46 science and engineering programs written in Applesoft BASIC. The programs cover, among other things, interpolation, regression,



thermodynamics, linear and differential equations, eigenvectors and eigenvalues, Fourier Series Analysis and integral evaluation. All programs are written to run on an Apple II with a minimum of 16K memory. The reader/user need not be well-versed in programming to run these programs; the programs need only be keyed in to be ready to run.

**PRICE: \$15.99**

**TITLE: SOLAR ENERGY FOR THE HOME**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** With the price of fuels rising to astronomical heights, solar space heating systems are starting to become very attractive. But, how do you know if a solar heating installation will be economically feasible? This program can answer that question.

All you do is supply the location, size, interior details and the amount of window space in your home. The program will calculate the current heat loss of your home and the amount of heat gained from any south-facing window. Then, enter the data for the contemplated solar heat. It will even calculate the payback period and show you if your contemplated investment in solar heating will save you money.

For anyone seriously considering the advantages and economics of a solar conversion, this package can provide practical guidance. For professionals designing and installing solar systems, it's a must.

**PRICE: \$34.95**

**TITLE: SOLGAIN**

**PUBLISHERS NAME: SOLARSOFT, INC.**

**DESCRIPTION:** SOLGAIN is a routine to calculate the clear sky solar radiation both incident and transmitted through single and double pane glass with assigned shading coefficients. The program allows the glazing to be at any orientation, tilt, or latitude as well as allowing the specification of horizontal overhangs. Printouts give hourly solar azimuth, orientation, and angle of incidence, as well as solar radiation. Graphics have been used extensively to help in the presentation of data. These include graphs of either daily or monthly solar data both incident and/or transmitted.

**SOLGAIN Cross-Sectional Graph**

Another important enhancement to this program is the use of graphs to display the sun angles and shading of various overhangs and adjustable shading devices for any month or hour of the year. The following graph generated by SOLGAIN shows the hour by hour shading angles in February at 40 degrees north latitude. The letters near the radiating sun line angles on the graph represent the hours of the day as coded: a) 7am and 5pm, b) 8am and 4pm, c) 9am and 3pm, d) 10am and 2pm, e) 11am and 1pm, and f) 12 noon.

**PRICE:**

**TITLE: SPECSYSTEM**

**PUBLISHERS NAME: EVENTIDE CLOCKWORKS, INC.**

**DESCRIPTION:** A software package of applications for the Eventide Spectrum Analyzer that will allow you to perform reverberation time (RT60 measurements at the 31 ISO 1/3 octave frequencies) and to plot this data as 3-dimensional spectral surfaces (frequency vs. amplitude vs. time) on the Apple Hi-Res screen. Viewing the spectral surface created by a reverb decay can often give a good intuitive impression of the acoustics of a particular space. Spectral surfaces are also useful for studying the timbral



envelopes of musical instruments and in voice analysis applications. Complementing the RT60 and spectral surface software is a set of routines that perform real time analysis with interactive keyboard control of the measurement and display parameters. Because the various functions performed by the SPECSYSTEM package are complex and are often dependent upon execution speed, the bulk of this software (approximately 8K bytes) is written in 6502 machine code. A menu-driven executive program written in BASIC is provided (in both Integer and Applesoft versions) to pass parameters to and to CALL the various machine language routines. Four main groups of machine code subroutines: RTA, BUFFMAKER, SPECSURF, and RT60.

The REAL-TIME ANALYSIS menu item calls the RTA group of subroutines. These routines essentially duplicate the functions of the INTERPACT program, written in BASIC, that was supplied with the spectrum analyzer to perform analysis and display of 1/3 octave spectra in real time. There are several advantages of this routine over the original program:

- 1) The bargraph display is generated on the Hi-Res screen with greater dynamics range and resolution.
- 2) The display axes and legends provide more information on the status of the analyzer and the data.
- 3) New functions have been added such as variable period averaging and range switching.
- 4) The overhead time for polling the keyboard and updating parameters has been sharply reduced since the routine operates entirely in machine language. This yields a display that responds much faster to audio input.

The BUFFER CREATION menu calls the BUFFMAKER group of subroutines that create large buffers (arrays) of spectral data. The subroutines read successive blocks of 32 numbers (the 32 filter amplitudes) from the analyzer hardware and store them sequentially in memory. The number of blocks of data to store, the time interval between spectra, and the method of initiating the storage process may be specified by requesting various items from the menu.

SPECSURF and RT60 are the two remaining groups of subroutines, and use the data buffers created by BUFFMAKER. The SPECSURF routines use either one of the Apple's Hi-Res screens to plot the buffer data as an isometric view of a geometrical surface whose vertical axis is amplitude, horizontal axis is frequency, and whose diagonal axis represents time. The surface will have a shape that corresponds to the level in each filter channel as it varied over the time period of the reading. A reverberation decay, for example, will appear as an irregular sloping surface, like the side of a hill, as the levels in the filters decay at their own rates. Parameters that control the format of the plot are all specified by choosing items from the SPECTRAL SURFACE menu.

The buffers of spectral data created by BUFFMAKER are used by the RT60 group. RT60 will look through each buffer at data from a particular filter channel, displaying the curve created as its amplitude varies over time. In a typical reverberation decay the level will be steadily decreasing (as the sound dies away) and RT60 can calculate the time it would take the level to fall 60 dB. The information is displayed on the Hi-Res screen along with the time vs. amplitude curves of up to 8 filters in the Hi-Res colors. The parameters which control this display are set interactively from the keyboard, in a manner similar to the control of the RTA routines. RT60 itself is called from the BASIC program's main menu.

The executive BASIC program SPECSYSTEM that passes parameters to and CALLS the machine code routines is only a general example of the type of driver that could be written to control these sub-

routines. Some other executive program could be written to adapt the subroutines to a particular application that doesn't require such extensive control over all aspects of the subroutines operations. The machine language software has been written to make linkage to and parameter passing from BASIC as simple, yet as versatile as possible. All necessary operating parameters are set to their default values by a single initialization routine, so that you could conceivably write an (admittedly primitive) control program that was nothing but CALLS to the machine code. Alternatively, the subroutines could be executed directly from the Apple Monitor, using the "address G" format. The SPECSYSTFM manual contains a memory map and table of subroutine addresses and variable locations for those who want to write their own driver programs.

**PRICE:**

**TITLE: SPUR GEARS**

**PUBLISHERS NAME: COMPUTER HOUSE DIV/FLC, INC.**

**DESCRIPTION:** This program calculates; O.D., P.D., Circular Pitch, Measurement over Wires, Chordal Thickness, Arc Tooth Thickness, Involute of an Angle and Center Distance for Full depth or Stub Tooth External Gears.

**PRICE: \$35.00**

**TITLE: STADIA REDUCTION**

**PUBLISHERS NAME: DISCO TECH.**

**DESCRIPTION:** Calculates distance to, coordinates, and elevation at rod station. Displays and prints input and/or reduced data. Lets you correct input data at any time. Provides balancing option. Calculates up to 500 points.

**PRICE: \$325.00**

**TITLE: STATICS ON MICROCOMPUTERS**

**PUBLISHERS NAME: KERN PUBLICATIONS**

**DESCRIPTION:** A course in statics on a microcomputer, 2 and 3 dimensional force/moment problems solved and displayed in color graphics. Complex mechanics problems easily visualized. Force systems, equilibrium, friction, vector addition, etc.

**PRICE: \$19.95**

**TITLE: STRESS & STRAIN ON MICROCOMPUTERS**

**PUBLISHERS NAME: KERN PUBLICATIONS**

**DESCRIPTION:** A full course in strength of materials on a microcomputer. Theory and program listings for Mohr's circle, beam deflection, Poisson effect, buckling, etc. Color graphics output helps visualize physical behavior.

**PRICE: \$28.95 book with program listings**

**\$19.95 program disk**

**TITLE: SUNHEAT 1**

**PUBLISHERS NAME: SOLARTEK**

**DESCRIPTION:** SUNHEAT 1 program is used to put together and evaluate a variety of solar hot water systems. Anyone thinking of adding a solar hot water heating system to their home will want to use SUNHEAT 1 to fine out how various types of solar collectors, heat exchangers, preheat tank sizes and hot water tank sizes affect the amount of useful solar energy available from their system. SUNHEAT 1 can also be used to find the best tilt angle for the collector, type of collector and type of heat

transfer fluid used within the collector.

SUNHEAT 1 program is customized for each user's specific location with average temperature, cloudiness and available solar energy data. Typical hot water usage can be selected, or users can enter their own values. Once a system is configured, the program quickly calculates the amount of useful solar energy that can be collected each month and the percentage of a user's hot water needs that can be supplied by solar energy on a monthly and yearly basis.

**PRICE: \$19.00**

**TITLE: SUNOP**

**PUBLISHERS NAME: SOLARSOFT, INC.**

**DESCRIPTION:** SUNOP is divided into two sections, based on Chapter H and Appendix E of the Handbook. The first economically optimizes energy conservation levels for a building and then gives its optimized SSF and passive collector area. The second section optimizes the passive collector area, once the building thermal load has been set, and performs a yearly cash flow analysis. Among SUNOP's features:

Sensitivity studies with different economic variables are easily performed. These can include fuel escalation rates, interest rates, period of analyses, tax credits, etc.

Local building costs may be entered from the program in order to use the optimization section with local expenses.

All input data may be stored on and called up from a disk.

Output tables generated by SUNOP include:

1. Solar Savings Fraction, Load Collector Ratio, Passive Glazing Area, and D.
2. Conservation Options and Net Unit Cost.
3. Building Load-Reference and Optimized Home.
4. Conservation Costs- Reference and Optimized Home.
5. Solar Costs- Optimized Home
6. Uniform Life Cycle Costs- Reference and Optimized Home with Net Present Value Savings.
7. Worksheet for Generalized Economic Analysis.
8. Annual Cash Flow- Includes Tax Credits.

The program can display data in the graphic mode for a visual representation of the different options with overlays. Graphs can be stored on disk for printouts with a compatible printer.

Graphs generated by SUNOP include:

1. Net Present Value vs. Solar Savings Fraction.
2. Net Present Value vs. Area of Passive Collector Area.
3. Levelized Annual Heat Supply Cost vs. Solar Savings Fraction.
4. Solar Savings Fraction vs. Load Collector Ratio.
5. Solar Savings Fraction vs. Area of Passive Collector Area.
6. D (Derivative of Glazing Change) vs. Load Collector Ratio.

Files for SUNOP are generated by the SUNPAS program but may be calculated and entered manually if so desired.

**PRICE:**

**TITLE: SUNPAS**

**PUBLISHERS NAME: SOLARSOFT, INC.**

**DESCRIPTION:** SUNPAS uses a building's configuration, location, thermostat setting, internal heat gains, and numerous other factors to predict its auxiliary heating needs and Solar Savings Fraction (SSF).

Among SUNPAS'S features:

Calculates SSF for Direct GAIN, Trombe Wall, and Water Wall. An update scheduled for release in conjunction with the release of Volume III of the LANL Handbook will have the new 94 correlations from Los Alamos, including 27 Sunspace correlations.



A unique takeoffs entry section allows the entry and editing of the building description on screen in the form of building description on screen in the form of building dimensions (widths and heights from which SUNPAS automatically calculates the heat load on the building from this description, saving tedious calculation and recalculation by hand. Up to 40 building surfaces may be entered into this takeoff section.

Climate data for any location may be stored on disk and called up by the program. In addition climate data for several locations throughout the country will come already on an example disk with the program.

Solar insolation for any tilt, orientation and overhang is calculated in the program from data in the climate file. A monthly correction factor table is used to account for adjustable overhangs and deciduous tree shading.

An economic section calculated and stores the SSF associated with glazing areas incremented from zero to any specified level. The information generated is then analyzed by the SUNOP program.

All input data may be stored on and called up from a disk.

Output tables generated by SUNPAS include:

1. Building Takeoffs (Areas, U-Values, and Heat Loss plus Solar Surface Orientation and Shading).
2. Monthly and Yearly Solar Gains.
3. Monthly and Yearly Heat Loss.
4. Percentages of Heat Loss for Various Building Parts.
5. Monthly and Yearly Solar Load Ratio, Solar Savings Fraction, and Auxiliary Heating Requirement.

Generates bar graph of Solar Savings Fraction and required auxiliary heat.

**PRICE:**

**TITLE: SUNSIM-2**

**PUBLISHERS NAME: SOLARTEK**

**DESCRIPTION:** Our SUNSIM-2 program is similar to SUNSIM-1 except that it uses flat-plate, tracking solar collectors that follow the sun and are normal to it throughout the day. As in SUNSIM-1, all days are reflected solar radiation is calculated and included in the energy collected. SUNSIM-2 has the additional option of allowing the user to specify the solar collector's efficiency, or the user can use the default (50%) value.

**PRICE: \$49.00**

**TITLE: SUNSIM-3**

**PUBLISHERS NAME: SOLARTEK**

**DESCRIPTION:** Our SUNSIM-3 program is similar to SUNSIM-2 except that concentrating, tracking solar collectors are used. The concentrating collectors remain normal to the sun throughout each cloudless day, but do not collect diffuse or reflected solar radiation. The collector-efficiency input-option is included in this program.

**PRICE: \$49.00**

**TITLE: SUNSIM-4**

**PUBLISHERS NAME: SOLARTEK**

**DESCRIPTION:** Our SUNSIM-4 program is similar to SUNSIM-1 with the addition of a cloudiness factor. The user can input the average percent of cloudiness (all day or random hours), or use the 50% default value. The program selects hours or whole days at random as cloudy (i.e. without any available solar energy) according to the specified input values.

**PRICE: \$59.00**



**TITLE: SURVEYOR'S AIDE****PUBLISHERS NAME: HARRISONBURG COMPUTER SERVICES**

**DESCRIPTION:** "Surveyor's Aide" surveying software for microcomputers will run on either an Apple II or III (in native mode with Business Basic). It allows the surveyor to do all major coordinate geometry calculations as well as traverse closure. Although "Surveyor's Aide" is a complete surveying system, each surveyor has differing needs. Because of this "Surveyor's Aide" was programmed with adaptability in mind. Harrisonburg Computer Services will modify any section of the program for a small additional charge to accommodate each user. "Surveyor's Aide" is also listable and modifiable. By using "Surveyor's Aide", today's surveyor can use the computing power of the Apple for tasks other than surveying.

**PRICE: \$500.00**

**TITLE: T-SQUARE****PUBLISHERS NAME: T & W SYSTEMS, INC.**

**DESCRIPTION:** Version 2.1 has been well received and several have been delivered since the release of 2.1. All existing customers with extended warranties have been upgraded to the new version. The next release will include crosshatching and symbol-pick from the digitizer as well as several cleanup items suggested by users.

According to Ditechs (a San Francisco CAI service bureau who is also the T & W northern California rep) the next release of T-SQUARE will contain over 90% of the features of any major 2D general purpose drafting system, except at less than half the cost.

**PRICE:**

**TITLE: TEK-PAK****PUBLISHERS NAME: MEDIA SERVICE CONCEPTS**

**DESCRIPTION:** A collection of utility programs for the broadcast engineer. Includes routines to calculate electronic information useful in everyday radio or TV station operations.

**PRICE: \$200.00**

**TITLE: TEMPERATURE CONTROL PROGRAM****PUBLISHERS NAME: STRAWBERRY TREE COMPUTERS**

**DESCRIPTION:** Allows your computer to control heaters, fans, and pumps. Uses a BSR controller (not made by Strawberry Tree) to send signals through house wires to switch appliances on or off. Enter temperature or time at which device is to turn on or off.

**PRICE:**

**TITLE: TEMPSENSE TEMPERATURE MONITORING SYSTEM****PUBLISHERS NAME: INTERACTIVE MICROWARE, INC.**

**DESCRIPTION:** Interactive Microware's TEMPSENSE (TM) accessory allows the IMI ADALAB (TM) Interface Card to continuously monitor from 1 to 64 temperatures, using either thermocouples or low-cost solid-state sensors. The hardware consists of one ADALAB interface card, one or more ADA-MUX multiplexers, and an optional ADA-AMP instrumentation amplifier (required for thermocouple measurements). The ADA-MUX multiplexer features easy-to-use screw terminal connectors for each temperature sensor as well as differential reed relays which minimize attenuation of low voltage signals. IMI's ADA-AMP amplifier provides selectable gain settings

of 0.1, 1, 10, and 100, followed by a variable gain from 1 to 10. Since ADALAB also has jumper-selectable ranges of +0.5 V, +1 V, +2 V, and +4 V, the combination of ADALAB with ADA-AMP yields a full-scale resolution of +2047 counts for input voltages ranging from +0.5 millivolt to +40 volts.

TEMPSENSE (TM) software for the Apple II guides you through adjustment of the amplifier, calibration of sensors using an ice bath and another known temperature bath, and selection of the high and low temperature alarm limits for each channel. For each channel, one of several methods for cold junction compensation may be selected:

(a) The user may specify a fixed temperature for the cold junction.

(b) A solid-state sensor may be used to measure the temperature of the cold junction.

(c) One thermocouple held in an ice bath may be used to calculate the temperature of the cold junction.

(d) Any probe may be referenced to a temperature measured by another probe. This method is useful when the cold junction block is located at a remote site.

The data logging features of TEMPSENSE are very convenient to use. After the set-up conditions have been specified, you may select the frequency of sampling (up to 3 samples per second) and the number of measurements to be averaged for each reading.

Then, you specify the total duration of sampling and the name of the disk file which will be used to store the data. The time of each measurement is listed on the screen, together with the temperature measured for each probe; optionally, the results may be printed for hard copy. The "bell" rings, and an asterisk is printed beside each value that is outside the prescribed limits. When the data buffer is full, the program automatically saves the data on disk and appends sequential batch numbers to the file name so that very long experiments can run without user intervention.

After the experiment is completed, you may request a summary of the data collected during any time interval. Normally, the data are stored on disks as binary files, but a special utility allows you to store and load data in text format, as well. This permits you to plot the data using Scientific Plotter, to analyze the data using Curve Fitter, or to process the data in your own BASIC programs. The TEMPSENSE program is written in BASIC and uses ADALAB's QUICKI/O Data Acquisition Software, so it is possible to modify the program for special purposes. For example, you could add a subroutine to turn on a light or close a switch or relay when an out-of-limit condition exists.

An exceptionally economical temperature monitoring system is possible using solid-state sensors (for 0 to 70 degrees Centigrade), since the ADA-AMP amplifier is not needed for solid-state sensors.

#### PRICE:

##### TEMPSENSE Temperature Monitoring Package:

ADALAB Interface Card, Self-test Adapter, and QUICKI/O Software	\$495
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ADA-MUX 8-channel Multiplexer	\$195
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(a) each additional 8 channels (up to 64 channels supported)	\$190
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(b) Installation of millivolt-level solid state sensor for thermocouple cold junction compensation	\$ 35
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(c) Heat-conductive, epoxy-encapsulated, EN-24	\$12
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solid-state temperature sensor (type LM334, 0 to 70 degrees C) with 6-foot cable and precision resistors. Output is 10 millivolts per degree Kelvin, so no amplification is needed.

- (d) Same as item (c) above, but uses Analog Devices AD590 metal can, -55 to 150 degrees C.

\$15

**TITLE: TFA (TRANSFER FUNCTION ANALYZER)**  
**PUBLISHERS NAME: DYNACOMP, INC.**

**DESCRIPTION:** This is a special software package which may be used to evaluate the transfer functions of systems such as hi-fi amplifiers and filters by examining their response to pulsed inputs. TFA is a major modification of FOURIER ANALYZER and contains an engineering oriented decibel versus log frequency plot as well as data editing features. Whereas FOURIER ANALYZER is designed for educational and scientific use, TFA is an engineering tool.

FOURIER ANALYZER and TFA may be purchased together for a combined price of \$29.95 (Cassettes) and \$37.95 (Diskettes)

**PRICE: \$19.95, Cassette \$23.95, Diskette**

**TITLE: THREE MILE ISLAND SPECIAL EDITION**  
**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Now any Apple owner can experience running the Three Mile Island nuclear power reactor by playing this exceptionally realistic simulation. Three Mile Island has been entirely rewritten in quick-response machine language. The six full-color displays literally 'pop' on the screen increasing the speed of play. Auto/Demo and Fast/Normal modes have been added to increase the action of this fascinating simulation game. The Special Edition is available to run on any 48K Apple.

**PRICE: \$39.95**

**TITLE: TOPOGRAPHIC**  
**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Allows you to present topographic information with three-dimensional realism. You can create seven different types of video displays all from a single set of data. It also lets you display climatological trends, socio-economic data, mathematical functions, engineering models-any information, in fact, that varies continuously with location.

**THIS PROGRAM:**

- \*provides a comprehensive library of graphics programs so you can choose the most effective way of displaying you data;
- \*includes two programs that let you use the full 16-color graphics capability of the Apple;
- \*has five programs that let you use Apple's high-resolution graphics capability;
- \* redraws maps from different points of view;
- \* provides two data entry programs that help you generate you won displays.

There are nine Topographic Mapping Programs and seven types of displays in the software package. Each is selected from a main menu.

Two low-resolution display programs take advantage of the Apple's ability to produce 16 different colors. One, Layer, depicts specified elevation ranges, producing a multicolored, "layer cake" graphic effect. The other program, Slope, uses color to



highlight different slope gradients in the terrain under study. Contour provides a standard topographic map, showing points along grid lines of equal elevation. Incline is similar, but instead of being limited to horizontal planes, you can actually choose the inclination angle of planes intersecting the terrain.

One of the most unique programs in the package is View, which produces a view of the landscape as seen from a selected point, looking in selected direction. The effect is startling, as you're thrust into the program's field of view where you can get an accurate look at the landscape from whatever perspective you've chosen.

With the Block program, you can produce an oblique view of a map area in orthogonal perspective. Plastic, another program, produces a shaded relief map of terrain that looks remarkably like a photograph.

To create your own maps and data bases for Topographic Mapping, you can use either of two data entry programs. Regular lets you take data from standard topographic maps or any other sources which have a regularly spaced grid, and convert it into a video display. If your data points don't fall into regularly spaced rows and columns, you can use a second program called Irregular, to enter line x, y, and z coordinates of relevant data points. The display programs then interpolate the data, just as they do with Regular.

**PRICE: \$65.00**

#### **TITLE: TSWING**

**PUBLISHERS NAME: SOLARSOFT, INC.**

**DESCRIPTION:** TSWING is a thermal network program which calculates the temperature swings in a building. It is particularly useful in the design of passive solar structures for sizing and placement of mass to prevent overheating. In hybrid systems, such as sunspaces with rockbeds, TSWING can aid in the sizing of fans and ducting systems. TSWING allows simulation of a fifteen node thermal network with graphs of temperatures at specified nodes as the design day progresses, and up to twenty nodes when no graphs are used.

**Among TSWING'S Features:**

Setup may be zone by zone with thermal type descriptions- with the program setting up the nodal network, or node by node. Zone by zone input allows full access to all capacitance and conductances whenever needed.

Input data includes capacitance of nodes, symmetrical and/or one way conductances between nodes for fan simulation, constant losses to a specified temperature, average outdoor temperature and temperature swing, hourly internal gains, five solar input patterns, and solar distribution from up to five sources to any node.

A fourteen day weather data file stored on disk allows dynamic simulations with varying weather.

Data can be displayed and edited on the screen for changing design parameters.

All input data can be stored on and called up from a disk.

The program can be set to automatically simulate the operation of movable insulation or fans at user defined times.

The speed of TSWING allows several variations to be run and compared rapidly.

Results can be printed out in either tabular or graphic form. The latter allows overlay graphs of the temperatures with various mass levels and other variations. Graphs may be saved on disk either for future reference or for interfacing with a graphic-dump program for the user's printer (not supplied).

**PRICE:**



**TITLE: UNI-SOLVE****PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** Designed for the electronic hobbyist and engineer, this series of programs provides you with 24 major solution sets to problems encountered in engineering and design, at a fraction of the cost of any similar software. Equations include such diverse computations as transmission line formula, reactance, coil winding models and modulation percentages, as well as those required in every day use. Clear and easy access is provided to each of the subroutines through a master menu.

(Cassette version requires 48K and ROM Applesoft).

**PRICE: Disk, \$24.95**

**Cassette, \$19.95**

**TITLE: WIND ENERGY CALCULATIONS****PUBLISHERS NAME: CHARLES O'NEILL**

**DESCRIPTION:** This program allows the prospective wind-charger buyer, builder, or experimenter to familiarize himself with the theory behind obtaining power from the wind. Simply input values for various parameters and choose how they are to be incremented for the calculations. Learn what propeller parameters are compatible with any size generator, what effect an increase or decrease in height has on power output, and what to expect from any combination of system size, efficiency, and wind velocity. Parameters that can be calculated include size, RPM, and tip-speed-ratio of propellers, useful watts available, kilowatt-hours per day output, and more.

**PRICE: \$9.50**

**TITLE: WOOD HEAT-1****PUBLISHERS NAME: MPA ENTERPRISES**

**DESCRIPTION:** Helps to determine the economy of heating with wood. To be useful, you must have some idea of your current energy costs.

**PRICE: \$25.00**

**TITLE: WORK MEASUREMENT GROUP****PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: TIME STANDARDS**

This program uses a simplified version of Work factor Analysis to develop time standards. Jobs are analyzed on an element-by-element basis.

**PROGRAM 2: LEARNING CURVE**

This program inputs data on successive parts manufactured and calculates the learning curve constant for the sequence. It also calculates the average unit cost for a given number of units produced and offers a number of options for effectively using the learning curve concept.

**PROGRAM 3: WORK SAMPLING ANALYZER**

This program helps the work sampling analyst determine the accuracy of his work sampling results. The input includes the number of observations along with the number of observations in which a particular event was observed.

**PROGRAM 4: WORK SAMPLING OBSERVATION GENERATOR**

This program allows the industrial engineer to input the number of random observations he wishes to take within a given time period along with a time period in question. The program then reports a sampling sequence which is randomly

generated. This program considers work breaks and minimum time between observations.

**PRICE:**

## COMPUTER GAMES

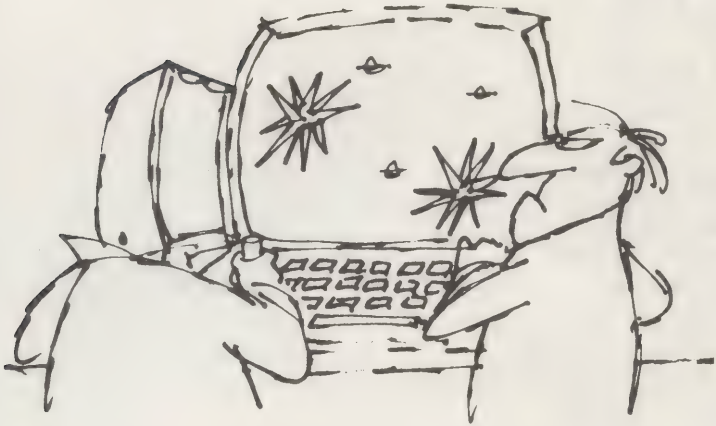
In this society, entertainment is considered a high calling. When the entertainment takes the form of literature, film, television or music, we often tag it with the name "art." So should we call entertainment software. Dan Gorlin's Choplifter, Nasir's Gorgon, Ken and Roberta Williams' Time Zone are all pieces of art as well as being comfortable items with which to while away the hours. Infocom's Zork and Michaël Berlyn's Cyborg are likewise art, although lacking the visual component.

Entertainment software has residual value in that it inculcates such skills as hand-eye coordination, puzzle solving, planning ahead, developing tactics, and implementing strategy. The best entertainment software requires two or more of those skills if the player is to be successful.

Equally as valuable is that entertainment software makes the computer less intimidating to those who approach it with timidity. After a beginner has shot twelve Space Invaders or gobbled up five Pac Men, a little GOTO is not as likely to fill the novice with dread.

Games have value in their own right as well as making the computer more accessible. So pull up a chair, boot that disk, and settle back for some hi-res enjoyment. You'll have lots of fun and maybe even learn something in the process.

Al Tommervik  
Softalk Magazine



# GAMES

## ADVENTURE

#1 ADVENTURELAND . . . . .	G-1
3 ADVENTURES . . . . .	G-1
ADAMS' ODYSSEY . . . . .	G-1
ADVENTURE . . . . .	G-1
AKALABETH . . . . .	G-1
CHAMBERS OF XENOBIA . . . . .	G-1
CLASSIC ADVENTURE . . . . .	G-2
CLOAK & DAGGER . . . . .	G-2
CYBORG . . . . .	G-2
DRAGON FIRE . . . . .	G-2
DUNGEON CAMPAIGN ADVENTURE . . . . .	G-2
EMPIRE OF THE OVERMIND . . . . .	G-3
ESCAPE . . . . .	G-3
ESCAPE FROM RUNGISTAN . . . . .	G-3
GOBLINS . . . . .	G-4
HI-RES ADVENTURE #1: MISSION ASTEROID . . . . .	G-4
KABUL SPY . . . . .	G-4
KNIGHT OF DIAMONDS . . . . .	G-4
LABYRINTH . . . . .	G-5
LORD OF KARMA . . . . .	G-5
MINOTAUR . . . . .	G-5
MISSION IMPOSSIBLE ADVENTURE . . . . .	G-5
MORLOC'S TOWER . . . . .	G-6
MYSTERY HOUSE . . . . .	G-6
NORTH ATLANTIC CONVOY RAIDER . . . . .	G-6
ODYSSEY IN TIME . . . . .	G-6
OLBOLF'S REVENGE . . . . .	G-6
PYRAMID OF DOOM . . . . .	G-7
QUEEN OF PHOBOS . . . . .	G-7
QUEST FOR ATLANTIS . . . . .	G-7
RACE FOR MIDNIGHT . . . . .	G-7
RESCUE AT RIGEL . . . . .	G-7
SAVAGE ISLAND PART I . . . . .	G-8
SAVAGE ISLAND PART II . . . . .	G-8
SHERWOOD FOREST . . . . .	G-8
SORCERER OF SIVA . . . . .	G-8
SPACE II . . . . .	G-9
SPECIAL SAMPLER . . . . .	G-9
STRANGE ODYSSEY . . . . .	G-9
SWORD OF ZEDEK . . . . .	G-9
TARTURIAN . . . . .	G-9
TEMPLE OF APSHAI . . . . .	G-9
THE CURSE OF CROWLEY MANOR . . . . .	G-10
THE DATESTONES OF RYN . . . . .	G-10
THE KEYS OF ACHERON . . . . .	G-10
THE MYSTIC ORACLE . . . . .	G-10
THE STONE OF SISYPHUS . . . . .	G-11
THE WIZARD . . . . .	G-11
THE WONDERFUL WORLD OF EAMON . . . . .	G-11
TIME TRAVELER . . . . .	G-11
TIME ZONE . . . . .	G-12
UPPER REACHES OF APSHAI . . . . .	G-12
VOODOO CASTLE THE COUNT AND GHOST TOWN . . . . .	G-12
VOYAGE OF THE VALKYRIE . . . . .	G-12
WILDERNESS CAMPAIGN . . . . .	G-12
WIZARDRY . . . . .	G-13
WIZARDRY PROVINC GROUNDS OF THE MAD OVERLORD . . . . .	G-13



# ARCADE GAMES

'SUPER' STARBASE GUNNER . . . . .	G-14
"LEARNING-FUN" DUO (TM) . . . . .	G-14
5 GREAT GAMES . . . . .	G-14
5 MORE GREAT GAMES . . . . .	G-14
A2-3D/A SATURN NAVIGATOR . . . . .	G-14
A2-PB1 PINBALL . . . . .	G-15
A2-SG1 ESCAPE . . . . .	G-15
ABM . . . . .	G-15
AIRSEA BATTLE . . . . .	G-15
ALIEN LANDER . . . . .	G-15
ALIEN RAIN . . . . .	G-15
APOLLO ASCENT . . . . .	G-16
APOLLO LANDER . . . . .	G-16
APPLE BOWL . . . . .	G-16
APPLE FUN . . . . .	G-16
APPLE GALAXIAN . . . . .	G-16
APPLE PANIC! . . . . .	G-16
APPLE POT POURRI . . . . .	G-16
APPLE TEK, SPACE WAR . . . . .	G-17
APPOINTMENT AT ALDEBARAN . . . . .	G-17
AUTOBAHN . . . . .	G-17
B-1 NUCLEAR BOMBER . . . . .	G-17
BATTER UP!!/A MICROBASEBALL GAME . . . . .	G-18
BEZ-ZERK . . . . .	G-18
BILL BUDGE'S SPACE ALBUM . . . . .	G-18
BILL BUDGE'S TRILOGY OF GAMES . . . . .	G-18
BLOCKADE . . . . .	G-18
BLOODY MURDER . . . . .	G-19
BORG . . . . .	G-19
BOTH BARRELS . . . . .	G-19
BUG ATTACK . . . . .	G-19
BUSTOUT . . . . .	G-20
CANNONBALL BLITZ . . . . .	G-20
COMPUTER FOOSBALL . . . . .	G-20
CONFLICT 2500 . . . . .	G-20
CONGO . . . . .	G-20
CROSSFIRE . . . . .	G-21
CYBER STRIKE . . . . .	G-21
CYCLOD . . . . .	G-21
DAVID'S MIDNIGHT MAGIC . . . . .	G-21
DEATHMAZE 5000 . . . . .	G-21
DOGFIGHT . . . . .	G-22
EPOCH . . . . .	G-22
ESCAPE FROM ARCTURUS . . . . .	G-22
FIREBUG . . . . .	G-22
FRAZZLE! . . . . .	G-23
FREE FALL . . . . .	G-23
GALAXY GATES . . . . .	G-23
GALAXY WARS . . . . .	G-24
GAME PACK #1 . . . . .	G-24
GAME PACK #2 . . . . .	G-24
GAME PLAYING WITH BASIC I . . . . .	G-24
GAMMA GOBLINS . . . . .	G-24
GENETIC DRIFT . . . . .	G-24
GOLDEN MOUNTAIN . . . . .	G-25
GOLDEN VOYAGE . . . . .	G-25
HADRON . . . . .	G-25
HEAD ON . . . . .	G-25
HOWITZER . . . . .	G-25
HYPER HEAD ON . . . . .	G-26
INVADERS . . . . .	G-26
INVASION OF PHOBOS . . . . .	G-26

JELLYFISH . . . . .	G-26
LE MANS . . . . .	G-26
LEM LANDER . . . . .	G-27
MICROWAVE . . . . .	G-27
MISSILE ATTACK . . . . .	G-27
MOUSKATTACK . . . . .	G-27
NIGHTMARE GALLERY . . . . .	G-28
ODYSSEY: THE COMPLETE APVENTURE . . . . .	G-28
ORBITRON . . . . .	G-28
OUTDOOR GAMES . . . . .	G-28
PEGASUS II . . . . .	G-29
PHANTOMS FIVE . . . . .	G-29
PLANETOIDS . . . . .	G-29
POOL 1.5 . . . . .	G-29
PROCYON WARRIOR . . . . .	G-29
PULSAR II . . . . .	G-29
RACER . . . . .	G-30
REAR GUARD . . . . .	G-30
REAR GUARD . . . . .	G-30
RED ALERT . . . . .	G-31
RED BARON . . . . .	G-31
SABOTAGE . . . . .	G-31
SANTA'S SLEIGH RIDE . . . . .	G-31
SKY WATCH . . . . .	G-31
SMASHUP . . . . .	G-31
SNACK ATTACK . . . . .	G-32
SNAKE BYTE . . . . .	G-32
SNEAKERS . . . . .	G-32
SOLO RACE . . . . .	G-32
SPACE DEFENSE . . . . .	G-32
SPACE EGGS . . . . .	G-32
SPACE GAMES I . . . . .	G-33
SPACE MAZE . . . . .	G-33
SPACE QUARKS . . . . .	G-33
SPACE WAR . . . . .	G-33
SPACE WARRIOR . . . . .	G-33
STAR ATTACK . . . . .	G-33
STAR THIEF . . . . .	G-34
SUPER INVASION . . . . .	G-34
TANK ATTACK/DEATH RUN . . . . .	G-34
TANK COMMAND . . . . .	G-34
THE ASTEROID FIELD . . . . .	G-34
THE BEST OF MUSE . . . . .	G-35
THE ELIMINATOR . . . . .	G-35
THIEF . . . . .	G-35
THRESHOLD . . . . .	G-35
TORAX . . . . .	G-36
TOWER OF HANOI . . . . .	G-36
TRACK ATTACK . . . . .	G-36
TRANQUILITY BASE . . . . .	G-36
TRAPSHOOT . . . . .	G-36
TRILOGY . . . . .	G-36
TSUNAMI . . . . .	G-37
TUNNEL TERROR . . . . .	G-37
TWERPS . . . . .	G-37
WILLIAM TELL . . . . .	G-38
ZERO GRAVITY PINBALL . . . . .	G-38

## GAMBLING

A YEAR AT THE RACES . . . . .	G-39
BLACK JACK TUTORIAL . . . . .	G-39
BRIDGE 2.0 . . . . .	G-39
BRIDGE TUTOR . . . . .	G-39

COMPUBRIDGE . . . . .	G-40
CRIBBAGE . . . . .	G-40
CRIBBAGE II . . . . .	G-40
DERBY DOWNS . . . . .	G-40
GAMES PEOPLE PLAY . . . . .	G-41
HEARTS 1.5 . . . . .	G-41
HORSE RACE HANDICAPPING SYSTEM . . . . .	G-41
POKENO . . . . .	G-41
POKER SLOT MACHINE/HI-RES PLAYING CARDS . . . . .	G-41
PRO FOOTBALL . . . . .	G-42
THE GOLD EDITION . . . . .	G-42
THE RACE TRACK (NEVADA VERSION) . . . . .	G-42
THE STRIP . . . . .	G-42
THE WORLD'S GREATEST BLACKJACK PROGRAM . . . . .	G-42
TURF ANALYSIS . . . . .	G-43
WIN AT THE RACES . . . . .	G-43

## STRATEGY

A STELLAR TREK . . . . .	G-45
A2-FS1 FLIGHT SIMULATOR . . . . .	G-45
AIR TRAFFIC CONTROLLER . . . . .	G-45
ADVENTURE TO ATLANTIS . . . . .	G-45
BASEBALL . . . . .	G-46
BOWLING/TRILOGY . . . . .	G-46
CARTELS & CUTTHROATS . . . . .	G-46
CASTLE WOLFENSTEIN . . . . .	G-46
CHECKERS . . . . .	G-46
CHESS . . . . .	G-47
CHESS CONNECTION . . . . .	G-47
COLORBLIND . . . . .	G-47
COLORMASTER . . . . .	G-47
COMMBAT . . . . .	G-47
COMPUTER ACQUIRE . . . . .	G-48
COMPUTER AIR COMBAT . . . . .	G-48
COMPUTER AMBUSH . . . . .	G-48
COMPUTER BASEBALL . . . . .	G-48
COMPUTER BISMARCK . . . . .	G-49
COMPUTER CONFLICT . . . . .	G-49
COMPUTER NAPOLEONICS . . . . .	G-49
COMPUTER QUARTERBACK . . . . .	G-49
CYTRON MASTERS . . . . .	G-50
DARK FOREST . . . . .	G-50
DOCTOR CHIPS . . . . .	G-50
DOOM CAVERN/SORCERER'S CHALLENGE . . . . .	G-50
EMPIRE 1: WORLD BUILDERS . . . . .	G-51
ENCOUNTER . . . . .	G-51
EXTRA SENSORY PERCEPTION/E.S.P. . . . .	G-51
FASTGAMMON . . . . .	G-51
FOOTBALL . . . . .	G-51
FOUR-IN-A-ROW . . . . .	G-52
GALACTIC EMPIRE . . . . .	G-52
GALACTIC REVOLUTION . . . . .	G-52
GALACTIC TRADER . . . . .	G-52
GAME PACK #3 . . . . .	G-52
GAME PACK #4 . . . . .	G-53
GENIUS . . . . .	G-53
GLOBAL WAR . . . . .	G-53
GOLF . . . . .	G-53
GREEN BERET . . . . .	G-53
GUNS OF FORT DEFIANCE . . . . .	G-54
HAUNTED HOUSE . . . . .	G-54
HI-RES COMPUTER GOLF . . . . .	G-54
HI-RES FOOTBALL . . . . .	G-54

HI-RES SOCCER . . . . .	G-54
INTERACTIVE FANTASIES . . . . .	G-54
INVASION ORION . . . . .	G-55
IV TAWALA'S LAST REDOUBT . . . . .	G-55
JABBERTALKY . . . . .	G-55
JET FIGHTER PILOT . . . . .	G-56
LOW SCORE II . . . . .	G-56
MAJOR LEAGUE BASEBALL . . . . .	G-56
MAZE GAME . . . . .	G-56
MICRO LEAGUE BASEBALL . . . . .	G-56
MICRO OTHELLO . . . . .	G-56
MIDWAY CHAMPAIGN . . . . .	G-57
MIMIC . . . . .	G-57
NAPOLEON'S CAMPAIGNS: 1813 & 1815 . . . . .	G-57
NUCLEAR REACTION . . . . .	G-57
NUKEWAR . . . . .	G-57
OIL TYCOON . . . . .	G-58
OLYMPIC DECATHLON . . . . .	G-58
OPERATION APOCALYPSE . . . . .	G-58
OTHELLO . . . . .	G-58
PERCEPTION PACKAGE . . . . .	G-58
PLANET MINERS . . . . .	G-59
REVERSAL . . . . .	G-59
RICOCHEM . . . . .	G-59
ROBOT WAR . . . . .	G-59
S.E.U.I.S. . . . .	G-59
SAHARA WARRIORS . . . . .	G-60
SANTA PARAVIA AND FIUMACCIO . . . . .	G-60
SARGON II - CHESS . . . . .	G-60
SAUCER INVASION . . . . .	G-61
SHADOW HAWK ONE . . . . .	G-61
SKYBOMBERS II . . . . .	G-61
SOUTHERN COMMAND . . . . .	G-61
SPACE . . . . .	G-61
STAR WARRIOR . . . . .	G-62
STARFLEET ORION . . . . .	G-62
STOCKS AND BONDS . . . . .	G-62
TANKTICS . . . . .	G-63
TAWALA'S LAST REDOUBT . . . . .	G-63
THE BATTLE OF SHILOH . . . . .	G-63
THE COSMIC BALANCE . . . . .	G-63
THE MAD MAD MAD MAD CUBE . . . . .	G-64
THE PRISONER . . . . .	G-64
THE SHATTERED ALLIANCE . . . . .	G-64
THE WARP FACTOR . . . . .	G-64
THREE MILE ISLAND . . . . .	G-64
TIGERS IN THE SNOW . . . . .	G-65
TORPEDO FIRE . . . . .	G-65
TUESDAY MORNING QUARTERBACK . . . . .	G-65
UFO . . . . .	G-65
WAR . . . . .	G-66
WAR OF THE SAMURAI . . . . .	G-66



## ADVENTURE GAMES

### **TITLE: #1 ADVENTURELAND**

**PUBLISHERS NAME: ADVENTURE INTEPNATIONAL**

**DESCRIPTION:** Wander through an enchanted realm and try to recover the 13 lost treasures. There are wild animals and magical beings to reckon with, as well as many other perils and mysteries. Can you rescue the Blue Ox from the quicksand? You'll never know until you try ADVENTURE #1!

**PRICE:**

### **TITLE: 3 ADVENTURES**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** Contains these programs:

**ADVENTURELAND** - You'll encounter wild animals, dwarfs and many other puzzles and perils as you wander through an enchanted world, trying to rescue the 13 lost treasures. Can you rescue the Blue Ox from the quicksand? Or find your way out of the maze of pits.

**PIRATE ADVENTURE** - "Yo Ho Ho and a bottle of rum..." You'll meet up with the pirate and his daffy bird along with many strange sights as you attempt to go from your London flat to Treasure Island. Can you recover Long John Silver's lost treasures?

**MISSION IMPOSSIBLE ADVENTURE** - Good Morning. Your mission is to in time? Or is the world's first automated nuclear reactor doomed? This one's well named, it's hard, there is no magic but plenty of suspense.

**PRICE: \$39.95**

### **TITLE: ADAMS' ODYSSEY**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** ITEMS NOW HAVE 3-D-ability (Insides, Outsides, etc.)

**MULTI-PLAYER** - up to 12 and they can be friend or foe.

**UNRESTRICTED COMMANDS** - up to full paragraphs!

**PRICE:**

### **TITLE: ADVENTURE**

**PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** If you've ever been lucky enough to play Adventure on a big computer, you know how addictive it is. Fantasy, deduction, and magic all come into play as you explore the changers of Colossal Cave, collecting treasure while avoiding pitfalls and hostile creatures. There are surprises around every corner, and even veteran players keep discovering new things and improving their scores.

**PRICE:**

### **TITLE: AKALABETH**

**PUBLISHERS NAME: CALIFORNIA PACIFIC COMPUTER CO.**

**DESCRIPTION:** A game of fantasy, cunning and danger. 10 different Hi-Res Monsters combined with perfect perspective and infinite dungeon levels create the world of Akalabeth.

**PRICE: \$34.95**

### **TITLE: CHAMBERS OF XENOBIA**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** An adventure game with Hi-Res and sound.

**PRICE: \$15.95**

**TITLE: CLASSIC ADVENTURE****PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** Scenic Will Crowther and Don Woods created it years ago, ADVENTURE has been programmed to run on nearly every computer known to man. At least three other versions of ADVENTURE exist for the APPLF. Some claim to be the only complete version; some claim to fill whole disks with program and data. To date, however, all require diskette access during the game to retrieve text for display on nearly every command. All added "features" of their own, changed some of the original text, or omitted something from the original.

In this version of ADVENTURE you get nothing but the real thing. All of the grandeur and mystery of the original Colossal Caves re-created here - nothing has been added or left out! By using a text compression technique seldom used on microcomputers.

**PRICE: \$20.95****TITLE: CLOAK & DAGGER****PUBLISHERS NAME: HORIZON SIMULATIONS****HARDWARE REQUIREMENTS: Joysticks**

**DESCRIPTION:** In the 1930's dramas were slowly unfolding in capital cities throughout the world. From dimly lit hotel rooms to highly sophisticated Intelligence Headquarters, men and women were playing a game of cat and mouse for scraps of information essential to the security of their country. CLOAK & DAGGER pits you against computer, or other players, and head of an intelligence Agency trying desperately to stay one step ahead of its rivals. Moving agencies from capital to capital, ferreting information, and offering bribes are fundamental parts of each player's turn...and your survival!

**PRICE: \$39.95****TITLE: CYBORG****PUBLISHERS NAME: SENTIENT SOFTWARE**

**DESCRIPTION:** A full sized science fiction adventure written by a professional science fiction author. A unique approach to adventuring -- no treasures & no score. Contains a hidden real time graphics simulation, character development, animals you can talk to, opinions from the CYBORG, a sophisticated story, and a consistency found in no other adventure.

**PRICE: \$32.95****TITLE: DRAGON FIRE****PUBLISHERS NAME: DAKIN 5 CORPORATION**

**DESCRIPTION:** A complete fantasy package, which includes:

- A full-length short story about this fantasy universe
- A list of detailed characters to choose from
- Ten levels of dungeons that randomly rearrange themselves so that each game is completely new
- Over 150 rooms and treasures.

**PRICE:****TITLE: DUNGEON CAMPAIGN ADVENTURE****PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Dungeon Campaign is a game of high adventure where the player directs an expeditionary force as it ventures into an underground labyrinth. The catacombs are filled with treasures and hazards, poisonous vapors and evil necromancers, stairways and pitfalls, sorcerous devices and an incredible assortment of

monstrous inhabitants.

The dungeon's monsters may pursue or wait in ambush. They have a variety of powers, strengths, and modes of attack and they become increasingly dangerous in battle as lower levels are reached.

As the secrets of the dungeon are uncovered by your force, a color coded map is generated until you find your way safely out with your treasures.

**PRICE: \$15.00**

**TITLE: EMPIRE OF THE OVERMIND**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** Enchanting solitaire game. Embark upon a heroic quest to a different plane of reality. The Overmind, a tyrant that is part machine, part spirit of evil, cleverly overthrew the great king, who escaped and planned revenge that has taken 1,000 years to fulfill. Now, YOU must travel to the Empire of the Overmind and destroy the abomination. Includes deluxe copy of Rhyme of the Overmind.

**PRICE: \$15.00 Cassette**

**\$20.00 Disk**

**TITLE: ESCAPE**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** An exciting 3-D adventure with special color graphics that place you inside a maze of hallways. Find your way out by following the logical clues that people inside will give you. But be careful...the liars will not hesitate to give you false maps and compasses. It's hard to quit this game! Rated the number 1 Apple cassette program by the Marin Computer Center.

**PRICE: Tape, \$12.95**

**TITLE: ESCAPE FROM RUNGISTAN**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** You awake with the worst headache of your life in a dank, sleepy jail cell deep in the bowels of the mid-African nation of Rungistan. You hold your breath and listen as you overhear the guards saying you'll be shot at sunrise.

"No, No! There's got to be some mistake!" you plead. The guards laugh maniacally exposing their rotting teeth. You immediately think of killing the travel agent who suggested this "discount world tour".

"Maybe I can bribe a guard with my traveler's checks"! you think to yourself. Then you realize you left home without them. There is but one thing left to do - break out of jail and escape from Rungistan!

This will be a long and treacherous journey. Your travel agent failed to mention the severe climatic and topographic conditions in Rungistan. Not once was there even the slightest mention of deadly snakes, bears, cannibals and guerilla warriors. Yes, this vacation is turning out to be even more terrifying than going to Disneyland during a Boy Scout Convention.

Keep your wits about you, be clever and you'll have plenty to tell in your next "How I Spent My Summer Vacation" assignment. If not, you won't be able to tell anybody anything.

Challenging fun, action and adventure! Sirius' new game "Escape from Rungistan" has it all! The "great escape" features imaginative music and animation uniquely blended to produce a whole new approach to adventure games.

Stock up early! Experts predict a record season for tourists taking a computer vacation to mysterious Rungistan!



**PRICE:**

**TITLE: GOBLINS**

**PUBLISHERS NAME: HIGHLANDS COMPUTER SERVICES**

**DESCRIPTION:** Escape to GOBLIN Country, an adventure to challenge your wits and cunning where you will need skill and sorcery to survive Dragons, Ogres and Goblins. Myths and Magic, Treasure and Danger. Fantastic High Resolution Graphics and animation help you on your journey.

A world apart- enter if you dare!

**PRICE: \$27.50**

**TITLE: HI-RES ADVENTURE #1: MISSION ASTEROID**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** MISSION ASTEROID takes its number from its intended level of difficulty. Less expensive to serve as an introduction to Hi-Res adventures, MISSION ASTEROID includes methodology hints in the course of play. It also includes the best graphics yet from the company and a delightful adventure - even for veterans - in attempting to save the Earth from an asteroid within a time limit.

**PRICE: \$19.95**

**TITLE: KABUL SPY**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** "Salam, Kabul Spy. Ali! Excellent, you have found me. They say you are ruthless, but perhaps you are clever too." "I am Hisrin, your guide. So, you are the agent helping to search for Professor Eisenstadt? Yes, we heard he was captured in... ah, May of 1981, something in northern Afghanistan, perhaps by the KGB? An unfortunate incident, especially because of his, shall we say, sensitive knowledge. You will have to make sure no one gets his information, yes? But then, you are not known for your works of charity. They have told me you have a money belt, 300 rubles, a small pistol, a sharp knife and... a cyanide pill. Let us hope that the pill is not necessary. We will help you when possible, but you must be careful! You will undoubtedly meet some questionable types. I see you are strong. Good, that is necessary. You may have to climb mountains and cross rivers. What else? Ah yes, learn any Afghani you can. Now shall we go?" Kabul Spy. The adventure begins in Rahawalpur, Pakistan. You travel northward and then, with the help of a guide, cross the Afghanistan border. Left alone, you set out to secure the secrets of the imprisoned Professor Eisenstadt. The in-depth plot, extensive vocabulary and colorful graphics make Kabul Spy a most intriguing adventure game.

Kabul Spy...Sirius is ruthless when it comes to entertaining you.

**PRICE: \$34.95**

**TITLE: KNIGHT OF DIAMONDS**

**PUBLISHERS NAME: SIR-TECH SOFTWARE, INC.**

**DESCRIPTION:** The staff of Cnild was the finest example of its creator's forging skill. When properly used, it rendered the City of Llylgamyl invulnerable.

The staff projected a force field totally impervious to any physical or magical attack. Those who wanted to threaten Llylgamyl could not approach the city, while those who came with good will could enter and leave freely. It was the perfect defense, but it had one fatal flaw...those born in Llylgamyl were



unaffected by the staff. Thus it was possible for the evil Davalpus, aided by the forces of darkness, to seize the throne of Llylgamyl and slay the royal family. Fortunately, the young Princess Margd and her brother Alavil survived the royal court. Margd and Alavil both knew there was but one hope of defeating Davalpus. Together they retrieved the fabled armor of the great hero, "The Knight of Diamonds". Alavil, wearing the mystical garb, and carrying the staff, engaged Davalpus in an epic battle in the castle of Llylgamyl. Davalpus fell, but with his dying breath uttered a curse so unspeakable that it brought the castle down around the two combatants. All that was left was a smoking hole in the ground. Davalpus, Alavil and the staff were gone. If it is not returned, the city will fall!

**PRICE:**

**TITLE: LABYRINTH**

**PUBLISHERS NAME: MED SYSTEMS SOFTWARE**

**DESCRIPTION:** Deposits you in a huge maze of tunnels inhabited by gnomes, ghosts, witches, and an evil minotaur. You must find the weapons and treasure you need to lure and destroy the minotaur before he extinguishes you! The labyrinth meanders through space and time, so don't be surprised if you come upon yourself wandering through the lonely corridors...

**PRICE: \$14.95 Cassette**

**\$17.95 Disk**

**TITLE: LORD OF KARMA**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** A series of fantasy games programmed for the home computer market.

Karma has a solitaire feature. The computer becomes one's eyes and ears, but the player makes all the decisions.

There are few rules to learn because one tells the computer what to do by typing English sentences on the keyboard, like "walk north".

**PRICE:**

**TITLE: MINOTAUR**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** Flash back with us to Ancient Crete...Remember when Poseidon gave Minos, the King of Crete, a bull to sacrifice...Well, when Minos kept it for himself Poseidon retaliated by making Minos' wife fall in love with the bull. The offspring was a rather disagreeable blend of man and bull - the Minotaur.

Sirius now offers you the chance to re-live this classic story in a modern setting. Take Theseus' place in the labyrinth and you will travel through 16 different three-dimensional mazes. Armed with a laser sword, you will encounter a myriad of fanciful and frightful creatures. In our version of the story, the Minotaur keeps company with flying snakes, Charon, dragons, ghosts, spiders, scorpions and other monsters too horrible to mention. You'll start out with 99 lives, find wings to fly above the maze, a virgin to grant you extra lives, an elixir to drink which allows your spirit to roam free, a magical skull, and a club to bash through wall and floors.

**PRICE: \$34.95**

**TITLE: MISSION IMPOSSIBLE ADVENTURE**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** MISSION IMPOSSIBLE ADVENTURE - Good Morning. Your mission is to...and so it starts. Will you be able to complete your mission in time? Or is the world's first automated nuclear reactor doomed? This one's well named, it's hard, there is no magic but plenty of suspense. Good luck...

**PRICE:**

**TITLE: MORLOC'S TOWER**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** "Morloc's Tower" is the third title in the DunjonQuest series. In it you'll find 3 kinds of rings, a magic sword, two amulets, half a dozen other treasures, 30 rooms, 18 real-time command options, and a dozen types of monsters including crafty old Morloc himself. Morloc is an intelligent opponent for you to vanquish. Morloc's Tower is a fascinating game that's easy to learn but a real challenge to play again and again to improve your score.

**PRICE: \$14.95 Cassette**

**\$19.95 Disk**

**TITLE: MYSTERY HOUSE**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** See your adventure as you play, by use of over 100 Hi-Res pictures. Communicate in plain English, using a vocabulary of over 300 words. Each room of MYSTERY HOUSE is shown in Hi-Res graphics (created by VERSAWRITER), detailing the surroundings and individual objects. Discover the secrets in each room and the use of its contents.

As you explore the house, you uncover puzzles to be solved and hazards to be overcome. A secret passageway may lead you to the answer - or to your doom! ASSEMBLY.

**PRICE: \$24.95**

**TITLE: NORTH ATLANTIC CONVOY RAIDER**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** This game is a computer simulation of the Bismarck convoy raid of 1941. The computer controls the British convoys and British battleships. Will the Bismarck sink the Hood, only to be sunk in turn by the Rodney and King George V, as in history? Or, will the Bismarck cripple or sink the British Home Fleet and go rampaging through the convoy lanes? Your decisions will determine the fate of the Bismarck.

**PRICE: \$15.00**

**TITLE: ODYSSEY IN TIME**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION:** This spectacular new adventure game adds a new dimension of excitement and complexity to TIME TRAVELER.

ODYSSEY IN TIME includes all the challenges of TIME TRAVELER PLUS 10 additional eras. Each game is different and may be interrupted and saved at any point for later play.

**PRICE: \$39.95**

**TITLE: OLDORF'S REVENGE**

**PUBLISHERS NAME: HIGHLANDS COMPUTER SERVICES**

**DESCRIPTION:** As you explore the caverns and castles (each locale is done in Hi-res) looking for treasure, you must battle the one-eyed, two-thumbed torkie; find the grezerlips' sword; visit the snotgurgle's palace and get through the domain of the three-nosed

ickyup- Plus MORE!  
PRICE: \$19.95

**TITLE: PYRAMID OF DOOM**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** This is an Adventure that will transport you into a maddeingin dangerous land of crumbling ruins and trackless desert wastes - into the very PYRAMID OF DOOM! Jewels, gold - it's all here for the plundering - if you have the expertise to pull its recovery off!

**PRICE:**

**TITLE: QUEEN OF PHOROS**

**PUBLISHERS NAME: PHOENIX SOFTWARE**

**DESCRIPTION:** Prepare yourself for an adventure/fantasy the likes of which you've never seen! Set in deep space aboard a derelict starliner this HI-RES adventure pits you against four computer generated opponents. Are you skilled enough to outwit them in a race to recover the famed Mask of Kuh-Thu-Lu from the bowels of the ship? Continuing challenges face you as you near your goal. BE CAREFUL! Your greatest challenge still lies ahead...to evade the looters and get out...alive.

**PRICE: \$34.95**

**TITLE: QUEST FOR ATLANTIS**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** The forces of sorcery are gathering to repulse the marauding scientific Atlantian kingdom. The epic battle can end either in the enslavement of the world or the absolute destruction of Atlantis and the evil it represents. Combines hundreds of Hi-Res color pictures with arcade like animation and sound effects.

**PRICE: \$40.00**

**TITLE: RACE FOR MIDNIGHT**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** You live in a small town in the 14 century. You awakened this morning with a terrible pain in your arm, and you found a bloody gash in it. You covered it. Later you heard that the townspeople had seen a werewolf last night, and one of them wounded it with an arrow..."Got it in the arm!" he boasted.

You consider the wound on your arm with wonder and fear, realizing you have no recollection of last evening and how you got that wound...

So begin your adventure, before it's too late. Includes 75 rooms in magnificent Pi-Res color with action sounds that will fully engage your auditory senses.

**PRICE: \$29.95**

**TITLE: RESCUE AT RIGEL**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** With "Rescue at Rigel," you can have the excitement of our fantasy role-playing system in the science-fiction universe of "Starfleet Orion" and "Invasion Orion." You take the part of the brave Smitty, and it's all up to you. You must find your way through a maze of corridors, chambers, graveshafts and teleports...trying to save the 10 humans held somewhere within. Their insectoid captors move them from room to room inside the complex, so each time you play, you must search again.



Armed with powergun and blaster, you must battle the aliens that lurk there, and then, somehow get yourself out of the moonbase alive. Your powergun and shield draw energy from your powerpack. Your blaster has only a handful of charges, and your rescue ship is under orders to leave- with or without you- in 60 minutes! Can you rescue the 10 prisoners before your powerpack is depleted? Can you get back to your rendezvous point in time? Can you escape the dreaded clutches of the unmerciful High Tollah? Try it, Smitty. You're their only hope.

**PRICE: \$29.95**

**TITLE: SAVAGE ISLAND PART I**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** A small island in a remote ocean holds an awesome secret - will you be able to discover it? This is the beginning of a two-part Adventure, the second half concluding as SAVAGE ISLAND PART 2.

**PRICE:**

**TITLE: SAVAGE ISLAND PART II**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** The suspense begun with Part I, now comes to an explosive conclusion with Part II! This Adventure requires you to have successfully finished #10 wherein you were given the password to begin this final half. The plot thickens as you wind your way through glowing corridors in search of the elusive clue that will enable you to solve the riddle of the island.

**PRICE:**

**TITLE: SHERWOOD FOREST**

**PUBLISHERS NAME: PHOENIX SOFTWARE**

**DESCRIPTION:** Join Robin Hood's merry band for a madcap chase through Sherwood Forest...

This adventure game adds the popular elements of swordplay, sorcery and a dash of humor to the classical tale to produce a great new twist on a popular theme.

Written in machine language, this program is for players of average ability.

**PRICE: \$34.95**

**TITLE: SORCERER OF SIVA**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** Amulets, rings, necklaces, scepters, - oh, yes, and a pair of old boots await you in the magical mines of Siva. Magic and riches abound. Put wealth is not all you seek.

Your spells can create openings in solid walls and sealed entrances, heal your wounds, restore your strength, or give you the gift of weightlessness which lets you move effortlessly from room to room. Your own bravery will decide how many spells you shall bring into the mines. But beware the evil Sorcerer, who is waiting to cast his favorite spell - forgetfulness - to deprive you of your most valuable magic.

Be warned, too, that not all treasures you might find are true. Mysterious items might drain your life's blood and leave you in blackness. Will a ring bring you only wealth? Can a pair of old boots do more than protect your soles? In experience lies wisdom. Good luck! And happy mining...

**PRICE: \$29.95**



**TITLE: SPACE II**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** SPACE II contains Characters, Chaman (your character launches a career as a religious practitioner attempting to build a cult following), and Psychodelia (gives clues to your character's makeup through experiences with mind altering drugs...in a safe, computer environment).

**PRICE: \$24.95**

**TITLE: SPECIAL SAMPLER**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** All of the elements of a full-length Adventure are contained in this special cut-down version of Adventure #1.

**PRICE:**

**SOFTWARE**

**TITLE: STRANGE ODYSSEY**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** STRANGE ODYSSEY - Marooned at the edge of the galaxy, you've stumbled on the ruins of an ancient alien civilization complete with fabulous treasures and unearthly technologies. Can you collect the treasures and return or will you end up MAROONED FOREVER...

**PRICE: \$19.95**

**TITLE: SWORD OF ZEDEK**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION:** Fight to overthrow Ra, The Master of Evil. Treachery, deceit and witchcraft must be faced in your struggles as you encounter wolves, dwarves, elves, dragons, etc. Each of the twelve treasures will enhance your power by making you invisible, invulnerable, etc. Each game is unique in this spectacular and complex world of fantasy.

**PRICE: \$24.95**

**TITLE: TARTURIAN**

**PUBLISHERS NAME: HIGHLANDS COMPUTER SERVICES**

**DESCRIPTION:** The TARTURIAN requires 48K RAM, Applesoft ROM, and disk. As you explore the 160 rooms (each done in Hi-Res) gathering weapons and treasure that will prepare you for the final battle against the TARTURIAN, you will encounter deadly KROLLS, battle the MINOTAUR, try and get by COUNT SNOOTTWEEKER, decipher the YUMMY YAKKY'S secret, make friends with the TULIESWEEP, avoid GHOULS, explore the PILLAR tombs, discover secret passages and more, 5 interlocking programs.

**PRICE: \$24.95**

**TITLE: TEMPLE OF APSHAI**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** Lets the player lead an "alter ego" on an adventure into a labyrinth of over 200 caverns and chambers, all graphically illustrated in color. The Temple of Apshai makes full use of the excellent graphics capabilities of this machine. Set in a strange medieval world, the discarded temple to Apshai, the Egyptian god of insects, is filled with monsters, magic, and untold wealth. The object is fame and fortune and the player is the hero where the strength of his sword arm and a strangely carved talisman around his neck may be the only things separating him from a pharaoh's treasure - or the mandibles of a giant

mantis.

The degree of difficulty can be adjusted by choosing from among four "levels" of the dungeon. Over 30 types of monsters, each represented by a different high resolution graphics character, jealously guard a wide variety of treasures and are ready to challenge even the bravest adventurer. The player has 18 options to choose from.

**PRICE: \$39.95**

**TITLE: THE CURSE OF CROWLEY MANOR**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** The scene is London, in 1913. Scotland Yard is buzzing with the news - there's been a murder at the Crowley Estate! What starts out as a simple homicide investigation becomes a trip into the depths of the occult as you try to solve The Curse of Crowley Manor. This program uses many unique plot-twists and strange devices to guide you through to victory, or a certain trip to the gates hell. Second in the Other Venture Series, this program is sure to keep you riveted to your computer screen waiting for the next axe to fall!

**PRICE: \$29.95**

**TITLE: THE DATESTONES OF RYN**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** A dastardly robber band led by the notorious rogue, Rex the Reaver, has stolen the precious Datestones from the ducal calendar of Ryn.

A fantasy role-playing adventure with more than a dozen real-time play options, and they're all easy-to-use single key commands. Flight or flee, parry or thrust, heal your wounds or speak with monsters. The choice is always yours.

The Datestones of Ryn has a built-in competitive scoring system that lets you measure how well you do in successive playings and allows you to test your prowess against that of your friends. Can you snatch every last Datestone from the robbers' grasp? Remember, you've only got 20 minutes.

**PRICE: \$19.95 Disk**

**\$19.95 Cassette**

**TITLE: THE KEYS OF ACHERON**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** On your journey, you'll meet a friendly unicorn with a magical necklace to help you in your search. But to reach him, you must cross the dark and fearsome mandrake forest. Other monsters inhabit the dim and frightful places through which you must pass to reach the four keys. But time is short and fame and fortune drive you onward to the end of your quest.

**PRICE: \$19.95**

**TITLE: THE MYSTIC ORACLE**

**PUBLISHERS NAME: HOMEWARE**

**DESCRIPTION:** Got a question? Consult the Oracle. Gaze into the crystal ball and see your answer appear. The mystic oracle knows all and answers all. But, be respectful, the Oracle gets upset and does strange things if you start insulting him and using language that is "not so nice".

**PRICE: \$10.00**

**TITLE: THE STONE OF SISYPHUS**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** Carries you to the thinking man's dungeon. A subterranean world of monsters, magic, traps and treasures demands brains rather than luck to survive (of course, you might take along your mace just in case...). A compacted data structure makes it possible to run this fantasy on a single disk drive. Expanded use of free-form input puts your ingenuity to an even greater test. The responsiveness of the programs to the individual qualities of the character make this adventure frustratingly enjoyable for hundreds of hours before its secrets can be unlocked.

**PRICE: \$29.95**

**TITLE: THE WIZARD**

**PUBLISHERS NAME: HIGHLANDS COMPUTER SERVICES**

**DESCRIPTION:** The Wizard is a well done and exciting Hi-Res adventure type game using over 100 Hi-Res pictures. The Wizard requires 48K, APPLESOFT ROM and disk.

As you explore the caverns and castles (each locale is done in Hi-Res) looking for treasure you must battle the one-eyed, two-thumbed torkie; find the Grezzerlips' sword; visit the Snotgurgles' palace and get through the domain of the three-nosed Ickyup plus more! A real must for adventure enthusiasts.

**PRICE: \$19.95**

**TITLE: THE WONDERFUL WORLD OF EAMON**

**PUBLISHERS NAME: THE COMPUTER EMPORIUM**

**DESCRIPTION:** Eamon is a fantasy-role playing game for the Apple II. With new dungeons being designed constantly, Eamon is infinitely expandable. At present, the world of Eamon consists of-

**EAMON MASTER DISKETTE-** This is the diskette you must have to live in the world of Eamon. It controls the creation of new characters, and includes the first adventure, The Beginner's Cave.

**ADVENTURE#2: THE LAIR OF THE MINOTAUR**

**ADVENTURE #3: THE CAVE OF THE MIND**

**ADVENTURE#4: THE ZYPHUR RIVERVENTURE**

**ADVENTURE#5: THE CASTLE OF DOOM**

**ADVENTURE#6: THE DEATH STAP**

**ADVENTURE #7: THE DEVIL'S TOMB**

**ADVENTURE#8: THE ABDUCTOR'S QUARTERS**

**SPECIAL: THE DUNGEON DESIGNER DISKETTE**

**THE ILLUSTRATED PLAYER'S MANUAL-** Although not necessary to participate in the wonderful world of Eamon, this invaluable collection of facts, descriptions, and suggestions is now available in printed form. Every serious Eamon player should have this book. Digest sized, sixteen pages. Write for price.

**PRICE: \$10.00 per diskette (two on a disk)**

**TITLE: TIME TRAVELER**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION:** The best of the adventure games. Confronts player with complex decision situations and at times, the demand for real time action. Using the time machine, players must face a challenging series of environments that include: the Athens of Pericles, Imperial Rome, Nebuchadnezzar's Babylon, Ikhnaton's Egypt, Jerusalem at the time of the crucifixion, the Crusades, Machiavelli's Italy, the French Revolution, the American Revolution and the English Civil War. Deal with government



operations, markets, etc. in fascinating game situations. Each game is unique!

**PRICE: \$24.95**

**TITLE: TIME ZONE**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** The year is 4081 and the people of Mother Earth are in peril. Ramadu, the mighty and sinister ruler of the planet Neburog, a thousand light years away, is about to declare war on a weaker and smaller Earth- a war which would mean total destruction, or worse, total servitude on the part of the people of Earth, to the evil Ramadu.

**PRICE:**

**TITLE: UPPER REACHES OF APSHAI**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** For the true Temple of Apschai aficionado, The Upper Reaches of Apschai is the first in a series of expansion dungeons for the award-winning "Temple".

Take your favorite character along, or have the Innkeeper generate a new one for a combined indoor and outdoor adventure.

**PRICE: \$19.95**

**TITLE: VODOO CASTLE THE COUNT AND GHOST TOWN**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** Contains these programs:

**VODOO CASTLE** - Count Cristo has had a fiendish curse put on him by his enemies. There he lies, you are his only hope...will you be able to rescue him - or is he forever doomed? Beware the Voodoo man.

**THE COUNT** - You wake up in a large brass bed somewhere in Transylvania. Who are you? What are you doing here?, and why did the postman deliver a bottle of blood? You'll love this Adventure. In fact, you might say it's Love at First Byte...

**GHOST TOWN** - Explore a deserted western mining town in search of 13 treasures. From rattlesnakes to runaway horses, this Adventure has them all! Just remember, pardner, they don't call them Ghost Towns for nothing!

**PRICE: \$39.95**

**TITLE: VOYAGE OF THE VALKYRIE**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

**DESCRIPTION:** You command the Valkyrie in a quest to conquer the island of Fugloy. To succeed, plot your course and maneuver to capture Fugloy's gold-filled castles. But, watch out...Fugloy is protected by bird creatures determined to destroy you. Imaginative sound effects, plus ten levels of difficulty, make this real time adventure game exciting.

**PRICE: \$39.95**

**TITLE: WILDERNESS CAMPAIGN**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Wilderness Campaign is a game of high adventure in which you undertake a crusade to free the kingdom of Draconia from the Evil Necromancer that is tyrannizing it. As you direct your party across the high resolution graphics map of Draconia, you must overcome obstacles, defeat hostile inhabitants, survive various natural hazards (avalanches, quicksand, etc.) and explore numerous tombs, temples, castles, and ruins in search



of gold and magical devices.  
**PRICE:**

**TITLE: WIZARDRY**

**PUBLISHERS NAME: SIR-TECH SOFTWARE, INC.**

**DESCRIPTION:** Wizardry is the ultimate computer Dungeons and Dragons, extremely faithful to the original. The authors merely act the role of Dungeon Master. You must generate your own characters. Elfred and the rest won't be on your version of Wizardry, but even if they were, you couldn't take them on an expedition or even look at them. Passwords protect each player's character from those of other players.

The town is text; the dungeon display consists of several areas: the status report, the message area, the commands, and the window into the dungeon.

The window is one quarter of the screen; through it, you have a three dimensional color view of the two or three next steps through the dungeon. When you encounter monsters, the image of one of the main group appears on the screen in place of the dungeon display, and the command list is replaced by the battle status.

Should you accidentally reset or lose electricity while you have a group in the dungeon, you can retrieve the entire group with one of several utility programs on the disk. However, to discourage cheating, the characters you revive with this utility will have aged ten years.

It is especially good news that Sir-Tech has no intention of leaving well enough alone, but plans to make disks of numerous scenarios into which you can take your old characters.

**PRICE:**

**TITLE: WIZARDRY: PROVING GROUNDS OF THE MAD OVERLORD**

**PUBLISHERS NAME: SIR-TECH SOFTWARE, INC.**

**DESCRIPTION:** Groups of up to 6 adventures explore a deep and mysterious maze in search of loot and glory. Brawny fighters, frail mages, nimble thieves, all must cooperate to survive. Not only must you battle hordes of monsters, but you must also solve the secret riddles hidden in the mazes. Starting from the safety of the castle, you must map the 3D maze as you move through it, swiftly running down the corridors and smashing through doors. Suddenly you encounter a group of monsters in their hideous lair. Leaping to the attack, swords swinging, your fighters wreak havoc amongst the monsters. Mages utter spells, causing destruction. Thieves skulk around in the corners, and priests attempt to bring the blessings of the gods upon your party. After the melee, there may be a chest to open, traps to evade, and loot to be divided.

A partial list of Wizardry features includes:

- A 10 level maze
  - 8 character classes
  - 5 races
  - 20 stored on disk
  - 3D maze display
  - complete castle
  - hundreds of monsters and magic items
  - monsters appear in mixed groups
  - 50 castable spells, usable by players, magic items and even monsters
  - 49 page illustrated manual
- PRICE: \$49.95**

## ARCADE GAMES

### **TITLE: SUPER STARRASE GUNNER**

**PUBLISHERS NAME: ARCHIVES**

**DESCRIPTION:** A need for a new approach exists, such as fast 3-D HIRES simulations with clever and complex challenges. How about shooting into the screen, into 3-D space, where the target is mathematically many feet behind the screen surface? How about computer intelligent targets that shoot back and use strategy and learn? How about all this and the best attributes of the more popular games? Lets include high score, 10 levels of play, snappy sound effects, colorful explosions and real time graphics. Why not go all the way and have a three dimensional gunsight? A real space battle simulation.

**PRICE: \$19.95**

### **TITLE: "LEARNING-FUN" DUO (TM)**

**PUBLISHERS NAME: MALIBU MICROCOMPUTING**

**DESCRIPTION:** Especially designed for young children. Combines learning with fun! Program 1: "TELL-TIME" interacts with the child in color, and HI-RES GRAPHICS to facilitate learning to tell time. Program 2: "SUPER PACE CAR" is the popular head-on collision type arcade game with simplified, two finger control for children. Hours of learning and fun. 32K, Applesoft/Machine Language.

**PRICE: \$14.95**

### **TITLE: 5 GREAT GAMES**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** ANIMAL BINGO- There are 50 animals of 10 types on your gameboard (monitor). The object is to line up 5 animals horizontally or vertically for "bingos", via certain game commands. Sounds simple, but a good score requires the brains of a good chess player. How can something that seems so easy be so challenging? Find out.

\* JUNGLE SAFARI

\* SPACE DEFENSE

\* SKY WATCH

\* AIR TRAFFIC CONTROLLEP

**PRICE: \$29.95**

### **TITLE: 5 MORE GREAT GAMES**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** DEEP SEA TREASURE- You've found a treasure chest under the sea and your boat lowers a winch-line to hand it up. You scuba-dive to attach the line. THEN! All of a sudden...you are faced with an octopus, a submarine with torpedoes, and then "JAWS" himself. If you get the treasure, you'll have darn well earned it. Animated swimming. Great sound effects.

\* MYSTERY CODE

\* DEPTH CHARGE

\* THE MINE FIELDS OF NORMALCY

\* TURN 'EM LOOSE!

**PRICE: \$29.95**

### **TITLE: A2-3D/A SATURN NAVIGATOR**

**PUBLISHERS NAME: SUBLOGIC COMMUNICATIONS, INC.**

**HARDWARE REQUIREMENTS: A2-3D 1**

**DESCRIPTION:** Simulate flight from Earth to Saturn through all of the necessary phases from leaving Earth's orbit and making mid-

course corrections to entering Saturn's orbit and docking with a Saturn orbital station.

Your Apple will apply the physics as it shows trial flight paths in response to your input and then carries you to the ringed planet.

**PRICE: \$24.95**

**TITLE: A2-PB1 PINBALL**

**PUBLISHERS NAME: SUBLOGIC COMMUNICATIONS, INC.**

**DESCRIPTION:** High-precision technology and superior programming skills combine to provide you with an exciting and enjoyable pinball game. And as your skill increases, A2-PB1 Pinball has the ball and flipper precision to make increased skill pay off.

**PRICE: \$29.95**

**TITLE: A2-SG1 ESCAPE**

**PUBLISHERS NAME: SUBLOGIC COMMUNICATIONS, INC.**

**DESCRIPTION:** You've just broken out of your cell in a maximum-security prison of the future. The electronic guards have been alerted and are closing in fast. Your stolen laser has eight shots left. Can you escape?

A challenging game of skill and strategy designed to maximize your leisure-time pleasure.

**PRICE: \$29.95**

**TITLE: ABM**

**PUBLISHERS NAME: MUSE SOFTWARE**

**HARDWARE REQUIREMENTS: joystick or paddle**

**DESCRIPTION:** Command your launch sites to fire 1 to 5 kiloton anti-ballistic missiles (ABMs). Save the Fast Coast from increasingly fierce enemy nuclear attack. Position your target cross-hairs to blast the green streamers before they fireball your cities, or worse, split into multiple warhead MIRVs turning the entire coast into thundering specter of destruction. Hi-res color graphics, sound high score to data memory.

**PRICE: \$24.95**

**TITLE: AIRSEA BATTLE**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** Combines Assembly Language and Integer BASIC to produce a Low Resolution Graphics battle between the Navy and the Air Force. You can choose sides (in either the Two-Player game or the One-Player vs. the Apple.) Shapes, Explosions, and Splashes heighten the Graphics effect.

**PRICE: \$19.95**

**TITLE: ALIEN LANDER**

**PUBLISHERS NAME: SERRA SOFTWARE**

**DESCRIPTION:** Lunar landing simulator. Offers you a birds-eye 3-D view of Lunar landscape as you maneuver your ship up or down to a soft landing.

**PRICE:**

**TITLE: ALIEN RAIN**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** In brilliantly colored array, the aliens swoop down from all sides in dazzlingly swift attacks to do battle upon the lone defender. Outstanding display of Hi-Res graphics.

**PRICE: \$24.95**

**TITLE: APOLLO ASCENT**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Blastoff to Orbit to Rendezvous. Applesoft plus 6K required.

**PRICE: \$7.95**

**TITLE: APOLLO LANDER**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**CATEGORY: Games**

**DESCRIPTION:** Semi simulation of separate and touchdown of lunar excursion module.

**PRICE: \$7.95**

**TITLE: APPLE BOWL**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Enjoy this realistic simulation of a bowling alley. You have complete control of the ball; APPLE keeps the score.

**PRICE: Disk, \$15.00**

**Tape, \$15.00**

**TITLE: APPLE FUN**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** We've taken five of our most popular programs and combined them into one tremendous package full of fun and excitement. This disk based package now offers you these great games:

\* MIMIC

\* AIR FLIGHT SIMULATION

\* COLOPMASER

\* STAR SHIP ATTACK

\* TRILOGY

**PRICE: \$19.95**

**TITLE: APPLE GALAXIAN**

**PUBLISHERS NAME: PRODERBUND SOFTWARE**

**DESCRIPTION:** Apple Galaxian - in brilliantly colored array, the Galaxians swoop down from all sides in dazzlingly swift attacks to do battle upon the lone defender. This faithful rendition of that most popular of all bar games may drive you around the bend, but think of all the quarters you'll be saving!

**PRICE: \$24.95**

**TITLE: APPLE PANIC!**

**PUBLISHERS NAME: PRODERBUND SOFTWARE**

**DESCRIPTION:** Hi-res arcade madness! You have to climb ladders and dig holes to try to trap the monsters that pursue you, then cover them over before they can escape. Many levels of play. Kids lined up for ages to play this one at Boston's Applefest.

**PRICE: \$29.95**

**TITLE: APPLE POT POURRI**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Contains these games:

**APPLE ADVENTURE** - You're lost in a huge cavern, with an open chasm on one side of you and a fire-breathing dragon on the



other. How can you overcome these and other treacherous obstacles, then press on to find the treasure?

Apple Adventure is an exciting, puzzling, sometimes mind-boggling game that challenges your memory, perseverance and verbal and intuitive abilities. You'll be kept mesmerized for hours - avoiding monsters, wandering through an underground maze, and bringing back treasure (if you're lucky). Save continuing games on a diskette, and print out your moves to record your progress. To make the game even more challenging, there are few instructions and no warnings. (But watch out for the pirate!)

**APPLE STELLAR INVADERS** - You're being bombarded by alien invaders! Evasive maneuvers and laser-sharp shooting are your only self-defense against extinction.

Four crumbling barricades shield you from above - should any aliens reach the ground or blast your tank five times, the game is over. Zap the invaders out of the ozone before they annihilate you!

**APPLE BOWL** - With Apple Bowl, the elusive 300 game is only a matter of time. This realistic full-color bowling alley simulation lets you bowl non-stop to your heart's content - your Apple keeps score automatically.

**PRICE:**

**TITLE: APPLE TEK, SPACE WAR**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Apple's version of the popular galactic warfare game. Man the guns of a rebel starship and try your marksmanship.

**PRICE: Tape, \$15.00**

**TITLE: APPOINTMENT AT ALDEBARAN**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**HARDWARE REQUIREMENTS: Joysticks or paddles**

**DESCRIPTION:** In the game Appointment at Aldebaran the new 3-D graphics has the player dodging asteroids and marauding space pirates. Even if successful at this stage, the player must still perform a tricky landing on the Aldebaran planet in order to deliver a life-saving serum.

Both games demand a quick mind and fast reflexes to complete.

**PRICE: \$24.95**

**TITLE: AUTORAHN**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** Have you ever wanted to drive at 120, 160, or even 200 kilometers per hour? The AUTORAHN is the only place to travel that fast. Provides driving excitement through heavy traffic, puddles, dark tunnels (with headlights) and even includes an occasional fire truck to avoid. The game is playable with paddles, joystick or keyboard. Other nice features are toggles for sound off/on, restart key, easy shifting of speeds, and super high-resolution graphics.

**PRICE:**

**TITLE: B-1 NUCLEAR BOMBER**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** You are the pilot of a B-1 bomber on a mission over the Soviet Union. You must fly through stiff Russian defenses to the target city, bomb it and return home. Your computer controls the Soviet MIG fighters and surface-to-air missiles. You must rely on your electronic counter measures and self-defense missiles.

**PRICE: \$15.00 Cassette**  
**\$20.00 Disk**

**TITLE: BATTER UP!!/A MICROBASEBALL GAME**  
**PUBLISHERS NAME: HAYTEN BOOK COMPANY**  
**DESCRIPTION:** This program truly tests your batting skills. Includes 3 levels of display.  
**PRICE: \$10.95**

**TITLE: BFZ-ZERK**  
**PUBLISHERS NAME: BEZ**  
**DESCRIPTION:** How many of the clone robots can you shoot down before you are finally blasted?  
**PRICE: \$26.95**

**TITLE: BILL BUDGE'S SPACE ALBUM**  
**PUBLISHERS NAME: CALIFORNIA PACIFIC COMPUTER CO.**  
**DESCRIPTION:** A series of excellent games with an excellent reputation  
\* death star  
\* solar shootout  
\* tail gunner  
\* asteroid  
**PRICE: \$39.95**

**TITLE: BILL BUDGE'S TRILOGY OF GAMES**  
**PUBLISHERS NAME: CALIFORNIA PACIFIC COMPUTER CO.**  
**DESCRIPTION:** Three exceptional Hi-Res graphic action games. The title page is great fun in itself with a gone-crazy pinball. FSCape takes you to the menu where you can select from the following games:  
**PINBALL** - Incredibly realistic flipper action. The best implementation of a pinball game on the Apple yet. Exciting screen action. PINBALL is a one or two player game not to be missed.  
**SPACE WARS** - Replica of a famous arcade game. Two adversary ships in a starfield with a central star around which the battle is waged. Options of light and heavy gravity. Be warned that the central star's gravitation may pull you to your doom. Also has options for screen boundary or wraparound. Sneak up on your opponent thru hyperspace. Running score ... for two players. Superlative graphics.  
**NIGHT DRIVER** - You race down a road on a pitch-black night and as you look out your windshield, you have only the lane markers to guide you. You steer and shift gears to finish the toughest course in the fastest time. Select from easy to tough with four road options. Fast and tricky.  
A wonderful implementation of programming and one of our best sellers.  
**PRICE: \$29.95**

**TITLE: BLOCKADE**  
**PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**  
**DESCRIPTION:** In this game, each player controls a colored marker which leaves a trailing path. The object is to keep your marker in motion longer than your opponent by not running into a wall, the other player's path. Direction is controlled on the keyboard, but you can't stop moving. Game options include one or two player games, and accelerated speeds which increase as the

game progresses.

**PRICE:**

**TITLE: BLOODY MURDER**

**PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** A 2 player knife fight - rated "P" for violence! Great hi-res color graphics, fast animation, gruesome sound effects and visuals, 3 levels of play, 48K/disk; play it with someone you hate!

**PRICE: \$19.95**

**TITLE: BORG**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** DERANGED GRUD TERROPIZES COUNTRYSIDE!  
ESCAPED SERVANT TELLS STORY

**GRUDONIA-**

Sightings of strange creatures in and around Grudonia have been striking terror into the hearts of decent citizens everywhere. The evil inventor of these creatures, GRUD, has been safely secluded in his apparently impregnable castle. But now, due to the timely escape of a disillusioned servant, we have received some clues that may enable someone to destroy the nefarious madman GRUD. We have permission to release the servant's testimony but, for obvious reasons, he wished to remain nameless. The servant trembled as he recalled finding his way out of the castle. "There are ten rooms full of chambers and passages and they are all protected by this Drageroo that GRUD created. It has wings and heat sensors and it can't be shot! Then there's all those little dragons. Dozens of them protecting every room - and they have guns! If GRUD hadn't told me some of the secrets of his mazes, I'd be dead right now. See the Green and Violet walls are deadly, they'll electrocute you if you touch them, but the Orange and Blue ones are safe. I had a sizzling time trying to get out," he chuckled nervously, "each room is different. Whoever goes after the GRUD will have to be fast and smart," the servant warned.

Can anyone destroy the evil genius GRUD and save our decent citizens? We hope so for our sake!

**PRICE: \$29.95**

**TITLE: BOTH BARRELS**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** BOTH BARRELS includes two games on the same diskette. DUCK HUNT is the traditional hunt from the blind, complete with dogs to retrieve the ducks and even an occasional dog fight to liven up the action. Hi-res, of course. HIGH NOON has you pitted against an entire town of BAD GUYS. They'll attack from doorways, windows, and even rooftops. Be quick or be dead. This has some of the most interesting graphics effects you'll see on the APPLE. Nine levels of play, one to match any age group. These games have great action, great graphics, and great sound effects. What else could you ask for?

**PRICE:**

**TITLE: BUG ATTACK**

**PUBLISHERS NAME: CAVALIER COMPUTER CORPORATION**

**DESCRIPTION:** Bug Attack is an exciting arcade action game involving ants, millipedes, and malicious medfly invasions. The

player defends his three gardens against attacking arthropods. Bug Attack will keep the whole family captive with colorful creatures, superb sound effects, and stimulating music. Can You Survive?

**PRICE: \$29.95**

**TITLE: BUSTOUT**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** Bust through the wall of bricks to get behind the wall and eliminate the wall of bricks. Behind the wall, eliminating the bricks is much faster. The ball starts slow but will soon go faster than you may be able to handle. When you get behind the wall, your paddle will get smaller. A beginner's mode is provided for less experienced players. BUSTOUT loads Integer BASIC and transfers all important subroutines into Assembly Language. Since BUSTOUT utilizes both Hi-Res pages and Assembly Language programming, its graphics are very fast and very smooth.

**PRICE:**

**TITLE: CANNONBALL BLITZ**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** Cannonball Castle, fortress of the enemy redcoats, sits high atop Nutcracker Hill. It is your mission, as a rebel soldier, to climb Nutcracker Hill and destroy the castle. Not so fast though- there are many traps and obstacles designed solely for your elimination. Rough terrain and enemy troops are bent on your destruction, and a constant rain of cannonballs could cause a fatally large headache. Many men before you have tried and failed, so it's all up to you...

Cannonball Blitz is an exciting new arcade game that will have you climbing the walls (the walls of Cannonball Castle) over and over again.

**PRICE: \$34.95**

**TITLE: COMPUTER FOOSBALL**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** Now you can play Foosball in your pajamas!

You say you have a sudden urge to play Foosball? Well, no more dressing up and braving the elements to get your kicks in a smoky, noisy arcade. Now, you and up to three of your friends can play Foosball at home. Divide into Crud and Robot teams and bash the ball around the screen. Have a Foosball slumber party.

**PRICE: \$29.95**

**TITLE: CONFLICT 2500**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** In 2500 AD, earth is threatened by attacking aliens programmed with an infinite number of attack strategies with which to tease the player who must defend earth. A variety of spaceships on the screen adds an extra dimension to the excitement and suspense of this clever game.

**PRICE: \$15.00** Cassette

**\$20.00** Disk

**TITLE: CONGO**

**PUBLISHERS NAME: SENTIENT SOFTWARE**

**DESCRIPTION:** Rescue survivors of a lost expedition as you float down from the headwaters of the raging CONGO river. Avoid wild animals, natives in their war canoes and dangerous rapids on your



quest for the missing survivors.  
**PRICE: \$34.95**

**TITLE: CROSSFIRE**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** They have landed and are taking over the city. Steadily they're making their way across town, destroying everything in their paths. The town has been evacuated and your regiment has retreated leaving you alone in the city at the mercy of the aliens.

The aliens have you surrounded, and laser shots fly from all directions. Your movements are confined but you haven't given up. If you are going to live, you'll have to concentrate on where the shots are coming from and where you're going because if you don't, you'll get caught in the CROSS FIRE.

**PRICE:**

**TITLE: CYBER STRIKE**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** A full 48K of assembly language programming with animation and original 3D effects that you haven't seen on the Apple before. MIND BOGGLING! Everyone said a game like this wasn't possible on the Apple but we did it; also includes a real time clock (Software implemented) and several levels of play.

**PRICE: \$39.95**

**TITLE: CYCLOD**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** CY-CLOD (siklad) n., pl. Cycloids [Cr.<cy, one-eyed clod, stumble bum] A mythical creature apparent in many legends: 1. in Ophidian legend, the name of three bug-eyed brick fighters known as Mascara, Glaucoma, and Cornea; 2. in Myopian legend, a cross between a clumsy mason and a one-eyed snake charmer; 3. in Sirius legend, the video representation of a game wherein an eyeball fights snakes with bricks. (The Sirius legend also gave rise to much derivative slang, i.e.: "A sharp snake in the eye", "snake-eye coordination," "built like a brick snake house," "block party", "snake eyes," and "the eyes have it".)

**PRICE:**

**TITLE: DAVID'S MIDNIGHT MAGIC**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** Hi-res pinball action at its best. Features dual flipper controls, upper and lower playing levels, tilt mechanism, rollovers, multiple ball play, electromagnetic deflectors, and many special effects.

**PRICE: \$34.95**

**TITLE: DEATHMAZE 5000**

**PUBLISHERS NAME: MED SYSTEMS SOFTWARE**

**DESCRIPTION:** The original 3-D adventure. The goal is simple: ESCAPE ALIVE! Accomplishing this goal is not so simple. Vile monsters, vicious dogs, hideous traps, and other lethal horrors will plague your every step as you struggle to survive one of the most difficult adventures ever written. Expect to die a hundred deaths before you escape this one!

**PRICE: \$14.95 Cassette**

**\$17.95 Disk**

**TITLE: DOGFIGHT****PUBLISHERS NAME: MICRO LAB****DESCRIPTION: A NEW CHALLENGE**

DOGFIGHT will capture your imagination. You are the pilot of a jet going into combat. You may fly alone on this mission, or you may have another pilot flying with you to defeat the enemy. First you fly against one enemy jet. You are in complete control: fly faster or slower, turn left or right - but most importantly, FIRE. If you are shot down, and you act quickly, you can bail out. You and your parachute float gently downware, hoping an enemy plane does not shoot you. If you survive, you will quickly return to the fierce dogfight. The enemy can also bail out!! You must shoot him down before he has a chance to return.

**THE ENEMY RETURNS**

Each time you defeat all enemy jets or helicopters, you advance to the next level where you fly against faster and/or more enemy planes. There are sixteen levels of difficulty to fight through. Bill Basham, the talented author of this high resolution program, has made it through only 8 levels before his planes were destroyed.

**MANY WAY TO PLAY**

DOGFIGHT may be played in several different ways. You, alone, may challenge the computer, or, two players may fly against the computer - either on the same team or on different teams. With DOGFIGHT you can create your own custom game with as many as eight players crowding around your Apple keyboard controlling their own planes. You may select jets or helicopters on any level - be a daredevil with 7 computer jets against you. You are in charge with the custom mode.

**FOR THE ACES**

Micro Lab will award a special achievement plaque to the first 10 pilots who reach 10,000 points in any of the auto modes. A special, individual secretly coded message will appear when reaching that score. Report that code to Micro Lab to claim the Ace title.

**PRICE: \$29.95****TITLE: FPOCH****PUBLISHERS NAME: SIRIUS SOFTWARE, INC.****HARDWARE REQUIREMENTS: paddles or joysticks**

**DESCRIPTION:** Explosive fast action with new 3-D effects. High speed docking and a time warp that is sure to give you vertigo.

**PRICE: \$34.95****TITLE: ESCAPE FROM ARCTURUS****PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** The Gremplims are invading your system; you must fight them off. This two part high speed arcade like game has plenty of Hi-Res color graphics and sound effects. Commanding the Space Fortress, you are attacked from all sides by increasing numbers and speed. Later, piloting Escape evacuation ships from Arcturon, you fight off a variety of invading landing craft. Keyboard and paddle control of fast action fun.

**PRICE: \$35.00****TITLE: FIREBUG****PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** The Computer Game That Sizzles.

Muse Software announces the release of Firebug, an exciting new

game for the Apple Computer. Firebug was written by Silas Warner, recently cited for top programming honors by Softalk Magazine. The scenario puts you, the Firebug, at the top of a five-story maze, complete with burning fuse, gasoline cans, and the dare to burn down the floors one at a time. Firebug requires lightning fast manual response and the ability to get out of tight corners, increasingly challenging mazes, and to outrace shorter, faster burning fuses. The screen provides eye-catching graphics of gas cans exploding in full color and walls disintegrating as they burn up, while the Firebug snakes through the hallways. Fantasy sound effects heighten your involvement as fire crackles and a constant tic-toc reminds you of time running out.

**PRICE: \$24.95**

**TITLE: FRAZZLE!**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Beasties from another dimension have surrounded your spaceship with an impenetrable force field, and they are closing in on you from all sides!

As the Beasties bounce around the force field and pass right through each other, you pick them up on your radar screen. Your only recourse is to drop Energy Probes in their paths to destroy the Beasties on impact.

Luckily, your Frazzle Force ship can speed up, slow down, and turn on a dime- so you can avoid fatal collisions with the Beasties, the Energy Probes, and the force field.

**PRICE:**

**TITLE: FREE FALL**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** Imagine yourself traveling through another dimension - a journey not only of sight and sound, but of the mind. A journey where the boundaries are marked only by your imagination. There's a signpost up ahead - could it be the Twilight Zone? No, it's Free Fall, a frolicking fast-action game from Mark Turmell, author of Sneakers and Beer Run.

Visualize a figure falling through four different dream-like diversions. In each, imagine guiding this apparition past a deadly variety of needles, Bip-Rops, Girders and Pombs. Envision the frantic figure clutching moving Girders and sinking through black holes, leading onward to yet another nightmare. Playing Free Fall is no fantasy! Free Fall is one of the most demanding games ever dreamed up! It's best to be wide awake and ready for anything when you begin this journey into the unknown.

**PRICE:**

**TITLE: GALAXY GATES**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**HARDWARE REQUIREMENTS: Paddles**

**DESCRIPTION:** An enemy starbase lies within the protective wrappings of 3 energy bands - your mission is to sheer away the energy bands with your fission bursts and destroy the alien base. This is GALAXY GATES - a hi-res simulation that can be enjoyed either with keyboard controls or optional game paddles. GALAXY GATES is what the Apple is all about - great sounds, brilliant colors, and action to the max! If you're up to a real challenge, then you're ready for GALAXY GATES!

**PRICE: \$29.95**



**TITLE: GALAXY WARS**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** Full color graphics and machine language sound effects and action make this an eerie challenge for you pilots anxious to maneuver your rocket through enemy fire and space fish to destroy enemy saucers. Each game is deadlier with surprises at advanced levels of play.

**PRICE: \$24.95**

**TITLE: GAME PACK #1**

**PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE**

**DESCRIPTION: CONTAINS:**

1. TEXTTRAIN: Race the on-screen clock with your text-format video "freight train." Real-time track switching & coupling simulations.
2. SUP SEARCH: Find the invisible enemy subs on your scope before your oxygen & fuel run out.
3. PICK-A-PAIR: A colorful party game! Uncover and remember the hidden graphics symbols.

**PRICE: \$24.00**

**TITLE: GAME PACK #2**

**PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE**

**DESCRIPTION: CONTAINS:**

1. WOWZO!: Our challenging changeable maze game! Search & capture targets in a flexible maze, and outmaneuver your opponent before time runs out!
2. ELEVATORS: Keyboard control four elevators in a CRT skyscraper.
3. QUICK-DRAW!: Two colorful gunmen shoot it out on your screen.

**PRICE: \$24.00**

**TITLE: GAME PLAYING WITH BASIC I**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Features 10 recreational and educational programs: Coin Toss, Coin by Coin, Coin Toss with Summary, Rolling One Dice, Seven/Eleven, Mouse in a Maze, a Random Walk, Rattle of the Numbers, Dealing a POKER Hand, and Tic-Tac-Toe.

**PRICE: Cassette, \$9.95**

**TITLE: GAMMA GOBLINS**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** Your mission is an exploratory operation (codename: BLUE). Your purpose is to deliver whole blood to Hemophilia, a city in the sky, and return to Anemia Base. This beautifully designed arcade game has unusual depth as swarms of GAMMA GOBLINS attack, wave after wave. This is an arcade game with great challenge and incredible variety.

**PRICE: \$29.95**

**TITLE: GENETIC DRIFT**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** You are surrounded on all sides by unfriendly life forms that fling their radioactive garbage at you. You fight back with some goodies of your own which cause the aliens to mutate. The object is to have them all mutate to friendly life forms, but watch out! It can be hard to distinguish friend from foe in the heart pounding confusion of evolution. Zap your



friends by mistake and you'll have to start the whole process over again.

**PRICE: \$29.95**

**TITLE: GOLDEN MOUNTAIN**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** Mine the Golden Mountain for precious gems and minerals without collapsing the mountain and toppling the cabin precariously balanced on its peak. Bandits will plunder your mine daily, but force them to make the mistake that brings down the mountain and you can play for extra points! A charming game of intellect. All graphics.

**PRICE: \$19.95**

**TITLE: GOLDEN VOYAGE**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** The king lies near death in the royal palace. You have only three days to bring back the elixir needed to rejuvenate him. Journey through the lands of magic fountains, sacred temples, stormy seas and gold, gold, GOLD! Can you find the Elixir in time? This one is for experienced Adventurers only!

**PRICE:**

**TITLE: HADRON**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** HADRON is a new and exciting 3-D space battle game by Larry Miller, the author of Epoch. The object of the game can either be to chase an enemy fighter through a speeding asteroid belt in an attempt to follow it to its base and destroy it, or to destroy as many enemies as possible for maximum points.

In HADRON, there are over a dozen enemies from five different classes as defined in the "FOE CHART". Many of the objects actually rotate as you approach them, creating astonishing 3-D effects never before seen on the Apple. Meet Chet and David, destroy a Purple Spinner or two, and battle with the famed HADRON space robot who actually walks toward you in space.

HADRON features high resolution color graphics, great sound effects, steering and speed response adjustment, and several Sirius Software convenience features such as sound on/off toggle, restart, and the "Pause Clause" feature which allows temporary halt of the program.

**PRICE: \$34.95**

**TITLE: HEAD ON**

**PUBLISHERS NAME: CALIFORNIA PACIFIC COMPUTER CO.**

**DESCRIPTION: WARNING:** this game is highly addictive!

\* Fantastic arcade quality game \* Boots directly on basic or pascal systems \* Runs on any configuration Apple II with 32K.

**PRICE: \$24.95**

**TITLE: HOWITZER**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** This is a one or two person game in which you must fire upon another howitzer position. This program is written in HIGH RESOLUTION graphics using different terrain and wind conditions each round to make this a demanding game. The difficulty level can be altered to suit the ability of the players.

**PRICE:**

**TITLE: HYPER HEAD ON**

**PUBLISHERS NAME: BRODERUND SOFTWARE**

**DESCRIPTION:** This fast action hi-res game is the best we have ever seen and attracted large crowds at the San Francisco Computer Faire when it was first demonstrated in this country!! Object is to maneuver your race car at high speed over a series of tracks while a computer controlled kamikaze tries to ram you head on!

**PRICE: \$24.95 Cassette**

**TITLE: INVADERS**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** You must destroy an invading fleet of 55 flying saucers while dodging the carpet of bombs they drop. Keep a wary eye for the mother ship directing the incursion. Your bomb shelters will help you for a while. Our version of a wellknown arcade game.

**PRICE:**

**TITLE: INVASION OF PHOBOS**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** Control the newest ship of the United States of Earth and attempt to attack and destroy the 11th, fighter base one of mars moons phobos. Includes sound effects and display of the action.

**PRICE: \$9.95**

**TITLE: JELLYFISH**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** SOUTH PACIFIC - while racing against a rival Soviet submarine to recover valuable nuclear warheads from the ocean floor, Navy sub USS Dogstar encountered another substantial obstacle. The Dogstar was attacked by giant jellyfish and vicious octopuses. Scientists suspect leakage from the warheads are responsible for the aggressive behavior of these usually docile sea creatures.

This incredible situation caused the Dogstar's captain great concern. "As if it wasn't dangerous enough battling the Russians, now it's the Jellyfish too! We shot them, but they break into smaller pieces and keep coming. They've got to be nuclear mutants!"

The Dogstar was dispatched recently to remove the warheads using its special mechanical arm. The sub is loaded with torpedoes to hold off the Soviets, and now the jellyfish and octopuses that are greatly hindering completion of this crucial mission.

Ironically, this curious underwater battle closely parallels the new computer game form Sirius Software--Jellyfish. Jellyfish features undersea adventures for one or two players in colorful high-resolution graphics.

**PRICE:**

**TITLE: LE MANS**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A fast racing game in Low Resolution graphics. One or two players compete by guiding the race car(s) along twistng, narrowing roads. Watch out for crashes and make it safely through the passes to win.

**PRICE: \$17.95**

**TITLE: LEM LANDER**

**PUBLISHERS NAME: HARRISONBURG COMPUTER SERVICES**

**DESCRIPTION:** A real-time version of the popular lunar lander game. This disk-based game includes nine landing scapes to try your hand at landing on. Your high-resolution LEM is controlled through space via the paddle knob (thrust) and the buttons (rotation).

**PRICE: 14.95**

**TITLE: MICROWAVE**

**PUBLISHERS NAME: CAVALIER COMPUTER CORPORATION**

**DESCRIPTION:** Teddy the Salvageman is fighting for his life. His job is repairing spaceships, and although he's the best repairman in the galaxy, his missions keep getting sabotaged by scores of aliens bent on destroying him. These creatures just don't know when to stop! This is no way to repair a spaceship! Teddy swears revenge against these demons, and cooks up a thermo nuclear war of his own! First Teddy stockpiles an arsenal of Microwave dishes. Then, as he picks up a power pack, Teddy aims a dish and ZAP...melted alien. Zero in with deadly accuracy, when you buy Microwave, one of today's hottest items. It's Teddy versus the aliens: will you be able to stand the heat?

**PRICE:**

**TITLE: MISSILE ATTACK**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**HARDWARE REQUIREMENTS: Joysticks**

**DESCRIPTION:** This real-time action game pits your twin silos of ABM's against a barrage of enemy missiles that are raining down upon your cities. MISSILE ATTACK will sharpen those reflexes to a cutting edge as you sight in on the descending ICRM'S and attempt to score hits before they decimate your cities. As your skill increases, so does the difficulty of this arcade-style game. Sharp, detailed graphics and realistic sound effects make MISSILE ATTACK a must! Also includes splitting ICRM'S & bonus cities! One of our consistently biggest sellers - the entire neighborhood will be over to play this one!

**PRICE: \$29.95**

**TITLE: MOUSKATTACK**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** RAT ALLEY is infamous among the legions of the plumber. Rumor has it that extremely large rodents live in the maze of tunnels that make up the area. The last plumber that ventured into RAT ALLEY disappeared without a trace. (The only clues they found as to his demise were a hard hat bent to look like Mickey Mouse ears, and a pipe wrench with a bite out of it). You are Larry Bait, ace Plumber, of Rodent Rooter plumbing service. Your job is to install pipe through the many levels of RAT ALLEY.

MOUSKATTACK is an unbeatable blend of quick thinking arcade action for one or two players.

**Features:**

- \* Full joystick control
- \* Quick Moving Color Graphics
- \* 100% Machine Language

**PRICE:**



**TITLE: NIGHTMARE GALLERY****PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Synergistic Software announces the release of Nightmare Gallery, a new fast action game for the Apple Computer. This colorful, high resolution game combines sound effects and high speed arcade action into one challenging computer game.

Players of Nightmare Gallery are trapped in a spooky graveyard with only a revolver to protect themselves against were-wolves, ghouls, ghosts, vampire bats, and mummies. Firing a stream of silver bullets, players dodge around the graveyard. Points are awarded for hitting the supernatural terrors and a scoreboard is built into the game. Nightmare Gallery speeds up as it progresses, making it even more challenging.

**PRICE: \$34.95**

**TITLE: ODYSSEY: THE COMPLETE ADVENTURE****PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** The Sargalo Sea is a haunted realm of sea serpents, dragons and fabulous beast. The mysterious islands which break its surface each have uniquely deadly perils. Yet, it is a land which can provide great wealth and power to the warrior strong enough to win it. In your crusade to defeat the dreaded Caliph of Lapour and win the golden scepter of power, you will cross the great sea, explore the jungles, swamps, and mountains of the islands. As you quest for the weapons and magical devices you will need to enter his fortress, you will search ancient tombs and temples and the dreaded Caverns of Mordril.

**PRICE: \$30.00**

**SOFTWARE****TITLE: ORBITRON****PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** This game places you in the center of an orbiting space station protected by a revolving force shield. The object is to fight off enemy forces which attempt to place killer satellites in orbit around your station. And be on the lookout for the fast-moving meteors. Great sound effects accompany this game which has seven levels of difficulty and many chances to score bonus points. Several nice features like a sound toggle, a restart key, and a pause control are also included.

**PRICE:**

**TITLE: OUTDOOR GAMES****PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** Features four games:

**FOREST FIPE** - Use chemical retardants and backfires to control raging forest fires.

**FISHING TRIP** - Try to catch flounder and salmon while avoiding logs, sharks, bad weather and running out of fuel.

**TREASURF ISLAND I** - Your map shows buried treasure but unfortunately you don't know where you are. Try to find the treasure while moving about and observing your surroundings. You have a 3-day supply of food and water. You may find useful objects (compass, weapons, a horse) but watch out for hazards (robot guards, pirates, caves, crocodiles, mountain lions and more).

**TREASURF ISLAND II** - Same game except you have to use a metal detector to find the treasure.

**PRICE: \$14.95 Cassette**



**TITLE: PEGASUS II****PUBLISHERS NAME: ON-LINE SYSTEMS****HARDWARE REQUIREMENTS: joysticks or paddles**

**DESCRIPTION:** You are the pilot of the fighter PEGASUS II. Your mission is to attack and destroy the base station of the enemy Gebellians (an alien race best known for depositing its eggs into space). If you fail to destroy them completely, they will eventually rise and take over your own alliance of 30 words (best known as The Top Thirty) making the universe unsafe for adventures anywhere.

-Fast Machine Language - Hi-Res animation and sound

-You control the Terrain - Make the Battlefield as challenging as you want

-PEGASUS II ship equipped with bombs and lasers

-Full Ship Movement - Control the speed and the altitude of your craft

**PRICE: \$29.95**

**TITLE: PHANTOMS FIVE****PUBLISHERS NAME: SIRIUS SOFTWARE**

**DESCRIPTION:** Simulates a fighter-bomber mission in real-time three-dimensional color graphics. While you try to make your bombing run you have to avoid being hit by anti-aircraft fire, and you have to fight off enemy aircraft as well. With five levels of play there is plenty of action for the novice as well as the advanced player.

**PRICE: \$29.95**

**TITLE: PLANETOIDS****PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** Occasionally a game comes along which generates favorable public response to such an intense degree that it will actually develop cult status. PLANETOIDS is such a game!

It's your ship versus a swarm of killer planetoids and alien ships as you try to destroy them before they blow you into the next galaxy! PLANETOIDS gives you super-sharp graphics and sound effects, making this a sure bet for hours of unlimited fun.

**PRICE: \$24.95**

**TITLE: POOL 1.5****PUBLISHERS NAME: INNOVATIVE DESIGN**

**DESCRIPTION:** A real-time, Hi-Res color simulation of pool. Allows you to play eight ball, rotation, nine ball or straight pool

**PRICE: \$34.95**

**TITLE: PROCYON WARRIOR****PUBLISHERS NAME: SYNCRGISTIC SOFTWARE****HARDWARE REQUIREMENTS: Joysticks or paddles**

**DESCRIPTION:** In Procyon Warrior the player must defend the space station Procyon against the deadly United Galactic Earth Federation. A variety of Drones and a formidable mother ship are fought off with plasma bombs and neutrino missiles.

Depending on his success, the player is promoted or demoted in rank.

**PRICE: \$24.95**

**TITLE: PULSAR II**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** This is an exciting and unique two game series that provides an incredible variety of play options. Each game part has eight levels of play and score can be transferred between the two. The object of the first part, "PULSAR," is to destroy the spinning shields around the pulsar and destroy it. Naturally its own defenses aggressively attempt to defeat you. The second part, "WORMWALL," places you in one of the strangest mazes ever created. The walls do not connect and openings only occur temporarily as colored lines cross. In the center, circles spin madly, with little creatures awaiting your arrival into their level of the maze.

**PRICE:**

**TITLE: RACER**

**PUBLISHERS NAME: BRODERUND SOFTWARE**

**DESCRIPTION:** Slip behind the wheel, ignite the engine and get ready for a high speed race. Racer uses Hires and paddles to simulate Grand Prix excitement. Requires 24K.

**PRICE: \$19.95**

**TITLE: REAR GUARD**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** You know those alien residents who look like blue jello and smell like a cow pasture on a warm day? Well, they're up in arms about something and have declared war! Their weapons aer Cyborg ships with their intelligent parts suspended inside. These Cyborgs pursue like crazed bats to try and kamikaze your crew pods. You're armed with an unlimited supply of Guided Energy Darts, but even when you blast em, their doomsday missiles come right at you! Good luck. (You'll need it!)

Rear Guard features many extras which are usually found only on coin-operated video arcade running high score (with high score "clear" option), two player option, brilliant horizontal scrolling, and great sound effects.

**PRICE: \$24.95; 24K Disk**

**\$19.95; 16K Tape**

**TITLE: REAR GUARD**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**HARDWARE REQUIREMENTS: Joysticks**

**DESCRIPTION:** Seldom has there been a program charged with such arcade-like power! In an awesome display of graphic relism, you are there - charged with protecting your mothership form the deadly waves of inhuman Cyborgs that are approaching from behind. You must maneuver around their ships as they pass and destroy them before they move offscreen and into contact with the mothership.

REAR GUARD flaunts the full range of your computer's sound capabilities, and features graphics so crisp and fluid that they actually seem to border on advanced computer animation! REAR GUARD also features many extras which are normally found only on expensive arcade machines, including advanced play levels, running high score (with a high score "clear" option), two-player setting, sharp graphics, horizontal scrolling and truly mind-boggling sounds.

So, if you've been searching for a program that will squeeze the maximum from your machine, thaen you've found it. REAR GUARD - your computer may never be the same!

**PRICE: \$29.95**

**TITLE: RED ALERT****PUBLISHERS NAME: BRODERBUND SOFTWARE****HARDWARE REQUIREMENTS: Joystick controller**

**DESCRIPTION:** Hiding behind a thin red shield, you must protect your base and supplies from a deadly alien menace, using your radar, ack-ack and remote rocket fire.

**PRICE: \$29.95****TITLE: RED BARON****PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** Red Baron is a fast-action game involving a MACHINE GUN DOGFIGHT between your WORLD WAR I BI-PLANE and the BARON'S. You control your flight using the Apple's paddles and fire your machine gun using the paddle button. For one or two players. Use HI-RES GRAPHICS and SOUND EFFECTS for realism.

**PRICE: \$29.95****TITLE: SABOTAGE****PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** You take command of a powerful gun base to shoot helicopters and aircraft out of the air. Beware, the opposition has plans to Sabotage your base! Can you defend yourself from the rain of bombs and paratroopers and keep your base in action? -Written in Machine language - quick animation and sound effects.

-Hi-Res color graphics.

-Works great with paddle or keyboard control.

-Conventional and controlled missiles.

-Rapid fire capability - mark and shoot at many targets simultaneously

-Automatically escalated skill level - the better you get, the tougher "they" get.

**PRICE:****TITLE: SANTA'S SLEIGH RIDE****PUBLISHERS NAME: ENERGY GAMES**

**DESCRIPTION:** Ride with Santa and Rudolf and drop packages into chimneys for points while avoiding the Grinch, satellites, and birds.

**PRICE: \$29.95****TITLE: SKY WATCH****PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Are you observant and skillful enough to get a "fix" on all the aircraft, comets, UFOs, etc. that are to be seen in the night sky? You'll find out!

**PRICE: \$9.95****TITLE: SMASHUP****PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** The object is to run over all of the dots on the track before the computer car smashes into your car. Beware! He is out to get you. Begin the game by choosing one of the four skill levels and then slip behind the steering wheel of your car. Get the feel of the throttle, and then really start to rack up the points. SMASHUP loads into Integer BASIC and then transfers all important subroutines into Assembly Language, making it's Hi-Res graphics very fast. SMASHUP has unique sound effects also in Assembly language making it even more lively.

## **PRICE:**

### **TITLE: SNACK ATTACK**

#### **PUBLISHERS NAME: DATAMOST**

**DESCRIPTION:** Try one game and you're caught in its irresistible web of peanuts. More fun than gorging on hot fudge sundaes. More exciting than anything like it.

SNACK ATTACK won't just a-maze you, it'll 3-maze you! Win the first level, and up pops a new, faster version, with a more intricate maze. And for more challenge there are doors you can enter and they can't. Doors they can dash thru and you can't! SNACK ATTACK...the game that defies anyone to stop after just one game!

**PRICE: \$29.95**

### **TITLE: SNAKE BYTE**

#### **PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** Snake Byte starts out politely. You (the snake) may accept or decline the presence of the Perilous Purple Plums who haphazardly bounce around the screen. Next, simply concentrate on slithering around the screen, chomping down apples as you go.

**PRICE: \$29.95**

### **TITLE: SNEAKERS**

#### **PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** It's now evident that Sneakers is one of the most popular Apple computer games ever! Players and critics alike concede that Sneaker's popularity is based on its seemingly endless variety of challenges. The game features eight separate attacks from some of the most animated and colorful characters to ever attempt to stomp you into submission.

GET READY FOR WAVE AFTER WAVE OF SNEAKERS, CYCLOPS, SAUCERS, FANGS, H-WINGS, METEORS, SCRAMBLES AND SCRUBS.

And, just when you think you've got them aced - lookout! There are five levels of difficulty, making Sneakers forty games in one!

**PRICE: \$29.95**

### **TITLE: SOLO RACE**

#### **PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION:** A very exciting and challenging Low Resolution auto race game where you drive a race car over curvy roads and around obstacles. You are allowed only 5 wrecks at which time you must have accumulated as many points as possible. This challenging game is superbly written.

**PRICE: \$16.95**

### **TITLE: SPACE DEFENSE**

#### **PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Use your game paddles and buttons to manipulate your starship or fire lasers or photon torpedos, as you defend yourself against all manner of alien attackers.

**PRICE: \$9.95**

### **TITLE: SPACE EGGS**

#### **PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** It will crack you up. This is a terrific arcade



style game that will have you hatching little spiders, wolves, lips and fuzzballs. Your problem is dealing with your creation. It's a hilariously fun time. Each package includes a multicolor T-shirt iron-on that says, "I FRIED THE SPACE EGGS."  
**PRICE: \$29.95**

**TITLE: SPACE GAMES I**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** Contains these programs:

**SAUCER INVASION** - Fire missiles to destroy the invaders who fly at different speeds and altitudes.

**STAR WARS** - Shoot down as many TIE fighters as possible in 90 seconds.

**ROCKET PILOT** - Maneuver your spaceship over the mountain using horizontal and vertical thrusters.

**DYNAMIC BOUNCER** - A colorful, ever-changing graphics demonstration.

**PRICE: \$11.95**

**TITLE: SPACE MAZE**

**PUBLISHERS NAME: NIBBLE**

**HARDWARE REQUIREMENTS: paddles or joysticks**

**DESCRIPTION:** A Hi-Res Graphics game in which the player pilots his ship through a Maze using the Game Paddle controls (or a Joystick). Includes a number of sound options and two levels of play.

**PRICE: \$24.95**

**TITLE: SPACE QUARKS**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** The Space Quarks are capable of a vast array of syncopted movements which will entertain you with their beautifully choreographed dances. But don't let yourself be hypnotized because they can get agitated and come flying down on you like kamikazes. Hi-res action with 10 levels of play.

**PRICE: \$29.95**

**TITLE: SPACE WAR**

**PUBLISHERS NAME: CREATIVE COMPUTING**

**DESCRIPTION:** The object is the destruction of the opponents ship by missile fire, by collision with the sun, or by explosion upon re-entry from hyperspace. Space War offers you 5 different modes of operation including reverse gravity. Ships can circle behind the screen and reappear on the other side of the galaxy. All the features of the arcade game on your micro. (16K).

**PRICE: \$14.95**

**TITLE: SPACE WARRIOR**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** You are the Space Warrior, attacked on all sides by multi-colored waves of drone ram ships. You must destroy them all before they pierce your shields and smash you to smithereens. Hi-res animation from the author of Planetoids.

**PRICE: \$24.95**

**TITLE: STAR ATTACK**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A very fast, High Resolution Graphics Shooting  
G-33

Gallery game. Seven ships scan across the screen making random appearances and sometimes at random speeds. Some are Hostile Klingnon and Tie Rattle Ships. Others are Friendly...Hospital Ship, Communications Satellite, and more. The trick is to Shoot the Bad Guys but not Friendly ships...and it's not easy! Runs under Game Paddle Control.

**PRICE: \$19.95**

**TITLE: STAR THIEF**

**PUBLISHERS NAME: CAVALIER COMPUTER CORPORATION**

**DESCRIPTION:** Star Thief is a game where 2 players can work co-operatively, or 1 can work alone to protect a supply of fuel pods from alien spacecraft that attempt to steal the valuable pods. Star Thief has 1 or 2 player options, and a unique training mission mode. Full color high resolution graphics and sound effects.

**PRICE: \$29.95**

**TITLE: SUPER INVASION**

**PUBLISHERS NAME: CREATIVE COMPUTING**

**DESCRIPTION:** Features high resolution graphics and antics by the moon creatures. A field of 55 aliens march across the screen showering you with lasers. As you pick them off one-by-one, your parapits wear away, and they whiz across the screen coming closer and closer to your level, with the original moon creatures and action twice as fast as any other invader game on the market. (32K). Also runs on Apple II Plus.

**PRICE: \$19.95**

**TITLE: TANK ATTACK/DEATH RUN**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Two arcade games on one disk. In the two player Tank Attack, guide your vehicle through a variety of terrains to approach and destroy your opponent. With the one player Death Run, it's you against the wiley computer controlled gremlin. Can you get him before he blows up your car with his bombs?

**PRICE: \$20.00**

**TITLE: TANK COMMAND**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** The ability to calculate odds very precisely is what you need to bulldoze the opposition in this one or two player game. Each tank has a range of fire, and selection of which tanks to fire allows you to shelter your most powerful weapons for long term gains.

**PRICE: \$14.95 Disk**  
**\$ 9.95 Cassette**

**TITLE: THE ASTEROID FIELD**

**PUBLISHERS NAME: CAVALIER COMPUTER CORPORATION**

**DESCRIPTION:** Asteroid Field brings arcade action to the Apple. The player must avoid the moving asteroids with the thrusters and destroy them with torpedoes. Alien spacecraft may enter, seeking destruction of the ship and its mission. Asteroid Field offers 2 levels of play and 5 game control options for paddles or keyboard. A quality game and a proven best-seller.

**PRICE \$24.95**

**TITLE: THE BEST OF MUSE****PUBLISHERS NAME: MUSE SOFTWARE**

DESCRIPTION: Presents five popular game programs including Escape and The Maze Game. Both of these three dimensional maze puzzles are perennial favorites of gamers of all ages. Also contained on the disk are Tank War and the Music Box, favorites from among Muse's early publications. The disk is rounded out with Side Shows' six mini-games. Each sideshow gives hours of fun and actually makes this a ten game package. This 'greatest hits album' is a must for the library of any game enthusiast.

PRICE: \$39.95

**TITLE: THE ELIMINATOR****PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

DESCRIPTION: Let's face it - the true measure of a program's worth is simple how much people enjoy playing it. Here at Adventure International, ELIMINATOR is a hands-down favorite! Wayne Westmoreland and Terry Gilman, the creative team that brought you ARMORED PATROL, have pulled out all the stops to bring you a game of skill, action, and derring-do that will cause your micro to cracle with excitement! Your mission is to prevent the marauding alien hordes from recovering your energizers from the planet's surface - and we'll tell you now that it isn't easy! There are several types of alien ships - each with its own deadly method of firepower - and their sole mission is your rapid destruction! Realistic sounds, running high score, two-player option - it's all here - it's all incredible!

PRICE: \$29.95

**TITLE: THIEF****PUBLISHERS NAME: DATAMOST**

DESCRIPTION: It seemed like a cinch assignment. At least for the galaxy's master thief.

Just sneak inside the Star-Complex Base, dodge a few guardian robots and grab the formula. A piece of cake.

Oh yeah! They didn't say the robots went berserk at the sight of a human. The didn't say I'd have to laser byway through 7 levels.

Or, that rampaging robots would keep coming and coming.

And most of all, they didn't bother to say there's some weird blob, an unearthly something that tracks you right thru the walls.

I made it to the 7th level. I found the formula. But, more robots are massing out there. And I'm wounded. My energy charge is low.

You, yes, you. How good a Thief are you? Prove yourself. Come get me. Come save me.

PRICE: \$29.95

**TITLE: THRESHOLD****PUBLISHERS NAME: ON-LINE SYSTEMS**

DESCRIPTION: ON-LINE SYSTEMS introduces arcade gaming as an art form. THRESHOLD, by Warren Schwader and Ken Williams, features fast smooth animation, HI-RFS graphics, and more challenge than you'll find in any other arcade game on the market.

THRESHOLD is an arcade game with alien attackers galore. In fact, there are more monsters out there than we expect you'll ever see. THRESHOLD was designed to be an arcade game that you won't get bored of, and that means a constantly changing game with a graduated skill level, but more than that, THRESHOLD means constant fun.

**PRICE: \$39.95**

**TITLE: TORAX**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**HARDWARE REQUIREMENTS: paddles**

**DESCRIPTION:** Defend your home planet against the invading Torids! Try to protect your nuclear fuel tanks, which the aliens are intent on stealing. The Torids drop down, steal a fuel tank and rise up to escape. They are also armed, and will not hesitate to shoot at you. While you whiz by the surface of your planet at incredible speed, you must avoid enemy fire, maneuver your ship, and try to shoot down the Torids without hitting the fuel tanks!

**PRICE: \$24.95**

**TITLE: TOWER OF HANOI**

**PUBLISHERS NAME: CREATIVE SOFTWARE**

**DESCRIPTION:** It looks easy, but you can't do it in the fewest moves.

**PRICE: \$19.95**

**TITLE: TRACK ATTACK**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** Steal gold from a moving train by intercepting it in your fast car or jump the train, running across the top of it to take control of the engine. A fast paced hi-res thriller with beautiful full color and large scale animation in three separate scenarios.

**PRICE: \$29.95**

**TITLE: TRANQUILITY BASE**

**PUBLISHERS NAME: BUDGECO**

**DESCRIPTION:** A great hi-res lunar lander, just like the arcade game!

Landscape scrolling

Auto zoom for landing site closeup

Player control of 360° craft rotation

Spectacular crashes

Always challenging...Improve your score as you improve your skill!

**PRICE: \$24.95**

**TITLE: TRAPSHOOT**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** A simulation in HI-RES graphics of the sport of trapshooting.

**PRICE: \$14.95**

**TITLE: TRILOGY**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** The object of BUSTOUT is to bust through the wall of bricks and get behind the wall and eliminate the wall of bricks. Behind the wall, eliminating the bricks is much faster. The ball starts slow but will soon go faster than you may be able to handle. When you get behind the wall, your paddle will get smaller. A beginners mode is provided for less experienced players.

**PRICE: \$24.95**



**TITLE: TSUNAMI****PUBLISHERS NAME: SENSATIONAL SOFTWARE****HARDWARE REQUIREMENTS: paddles**

**DESCRIPTION:** Wave after wave of alien attackers attempt to overwhelm your defenses. Each wave comes in a different formation and uses different attack and defense strategies. You get dozens of superior arcade games combined into one program. If you ever master the first set of games on the disk, where the attackers are without shields, then you are ready for the second set. This time the attackers are sheltered by shields, but you can shoot through them. Successive waves use different strategies. Some move from shield to shield, allowing you to shoot while they are in between. Others just come out briefly to attack, and you must have fast reflexes to get them. Bonus points are awarded for beating the clock, with a countdown timer displayed on screen.

**PRICE: \$29.95****TITLE: TUNNEL TERROR****PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** Space and time go berserk in TUNNEL TERROR - an Apple experience that will shatter your senses! the scenario: While your ship moves around the circles on the edge of the dimensional tunnel, the enemy will move up the sides until they either reach the tip or are destroyed by your ship's fission topedoes. The enemy is varied as well as deasly: "Walker-Carriers" split into two "walkers" upon reaching the tunnel exit and will try to destory your ship; "Crazies" are unpredictable and may attack upon emerging from the tunnel or retreat back into it - if you're lucky!

TUNNEL TERROR can be played by 1 to 4 players and features exciting sounds, high score save and 61 levels of difficulty to challenge both the beginner and the advanced player. You can choose either Apple Paddles or keyboard contreol, too!

**PRICE: \$29.95****TITLE: TWERPS****PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** If so, then one of your exploratory spaceships has just crashed on an asteroid and nine of your Twerp crew members have fallen into craters.

Along you come, Captain Twerp to the rescue! To begin, you leave the mother ship via your Twerp-craft (which has a limited supply of fuel) and shoot your way through a dense moving belt of the Twerp's ancient enemies, the Orbiters. Watch out, they shoot back! If you get through, you must carefully land on the blinking landing pad, or no more Captain Twerp.

You're not safe yet...After zipping over to the craters in the Twerp saucer, you must gather your stranded men, while avoiding the giant prehistoric Glinga. Glingas love to swoop down and steal Twerps and drop them in random craters. They're playful critters, but they waste your time and you're in a hurry to escape before the Gleepnok gets your. (A Gleepnok is one giant drooling mouth that eats Twerps!)

Gather as many survivors as you can, hurry into the Twerp saucer, head back to the Twerp-craft, blast back through the Orbiters, zoom to the mother ship, up the Twerp tube, and rack up points for all the Twerps you've rescued. Safe at last!

Twerps is a whimsical game of skill with eight levels of play. Written in assembly language by Dan Thompson, Twerps features easy control through keyboard, paddles, joystick, with Sirius

Software's Joyport. The program also includes the pause clause, for temporary halt of the game, restart, and sound toggle on/off.  
**PRICE: \$29.95**

**TITLE: WILLIAM TELL**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** You are William Tell. You only hve five arrows with you and to get a perfect score you must shoot the two apples off the tree and you must also shoot the apple on the boy's head three times. Don't aim too low! You might kill him and not receive any points.

The flight of the arrow depends on the tension on the bow when the arrow is launched. After each shot, the boy will comment about your shooting. Did you kill the boy? Well push the paddle switch and start over. WILLIAM TELL is an Integer BASIC game using Hi-Res graphics and is fun for all ages.

**PRICE: \$24.95**

**TITLE: ZERO GRAVITY PINBALL**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** PINBALL HAS GONE INTO ORBIT!

Now that you've conquered pool hall pinball, it's time to take your Apple into outer space.

A machine language arcade game with full color hi-res graphics, and sounds like you've never heard before.

**PRICE: \$29.95**

## GAMBLING

**TITLE: A YEAR AT THE RACES**

**PUBLISHERS NAME: SPORTSWARE, INC.**

**DESCRIPTION:** 3 exciting options of horseracing in one great game-

- \* Top 3 yr. olds race for the triple crown
- \* All top handicap horse race through an entire season
- \* Season after season of top handicap racing

Over 20 years in development!  
REALISTIC!

HORSES \* STATISTICS \* UPDATING

**PRICE: \$39.95**

**TITLE: BLACK JACK TUTORIAL**

**PUBLISHERS NAME: POWERSOFT, INC.**

**DESCRIPTION** This program is not just another black jack game. It has no graphics because it is not a game, but a learning tool. The object of this program is to teach the user how to play a winning game by eliminating poor play. Whenever the user makes a bad move the program will stop and show the proper moves. Most players face a disadvantage of between five and fifteen per cent because of poor play. The methods used here should give you a one percent disadvantage.

**PRICE: Tape, \$9.95**

**TITLE: BRIDGE 2.0**

**PUBLISHERS NAME: DYNACOMP, INC.**

**DESCRIPTION** An all-inclusive version of this most popular of card games. This program both BIDS and PLAYS either contract or duplicate bridge. Depending on the contract, your computer opponents will either play the offense OR defense. If you bid high, the computer will double your contract!

**PRICE: \$17.95 Cassette**

**\$21.95 Disk**

**TITLE: BRIDGE TUTOR**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION** Teaches all the tricks of better bridge, starting with the basics and building to tournament-level exercises. Endorsed by world champions Michel Lebel and Pierre Jais, Bridge Tutor allows you to practice whenever you want, specialize in areas where you need improvement, and take all the time you need to consider each move. Since the program lets you run through more hands in 10 minutes than you'd see in an entire night of playing, you can take advantage of your spare time to help you develop your skills.

This program:

- \* generates practice hands randomly so you can use the program over and over again;
- \* gives you immediate, detailed feedback on your bid or lead so you quickly learn exactly why your move was right or wrong;
- \* helps you learn the Standard American bidding system, and, in the expanded version, the Precision Club and Scientific bidding systems so you train for any level of social or tournament play;
- \* has standardized conventions built in for each of the different systems so you can gain familiarity with widely used bridge bidding practices;

If you don't know how to play bridge, or want a refresher on the fundamentals, Bridge Tutor offers a comprehensive course with full-color graphics and challenging questions to teach you rules

and strategy.

Once you know the game, the program's Bridge Quiz format lets you practice the range of decision making you face in actual game situations. Because the expanded versions of Bridge Quiz employs any of the three standard bidding systems, even advanced players can use it for learning and practice. It includes drill exercises that help you learn how to count points, make opening leads against no-trump hands, and make opening leads against suit contracts.

Highly interactive, Bridge Tutor asks you to identify appropriate bids and leads. If your bid or lead is incorrect, you can either try again, or ask the program to tell you the proper move and the logic behind it. The basic version includes exercises in the Standard American bidding system; the expanded version includes the Precision Club and Scientific bidding systems in addition to the basic version.

PRICE: ~~\$40.00~~ Basic Version  
\$60.00 Expanded Version

#### **TITLE: COMPUBRIDGE**

**PUBLISHERS NAME: BARCLAY BRIDGE SUPPLIES, INC.**

**DESCRIPTION** Each course includes a series of programmed lessons plus the unique QUIZMAKER which deals random hands for exercises on point count, opening bids, responses and rebids, then checks your answers and quizzes you or supplies the correct answer. The complete course includes popular conventions such as Stayman and Jacoby Transfers.

PRICE: Elementary Course Cassette for 16K or 32K \$19.95  
Complete Course Cassette for 16K or 32K \$29.95  
Complete Course Disk for 48K \$39.95

#### **TITLE: CRIBBAGE**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION** Offers you the opportunity to play the traditional game of cribbage. It's you against the computer. Detailed Hi-Res cards and a cribbage board which keeps track of your score. Learn this game or increase your skills to become a formidable opponent.

PRICE: \$29.95

#### **TITLE: CRIBBAGE II**

**PUBLISHERS NAME: COMPUTEK**

**DESCRIPTION** Includes many options, all of which can be chosen during game play.

- \* Change from keyboard to paddle and back with ease.

- \* Single key input to add or delete sound.

- \* Nine game playing speeds.

- \* Game may be halted at any time.

- \* Help! You will be shown all combinations of points in your hand. Beautiful Hi-Res color graphics, a scoreboard which displays all points and game standings, a standard style cribbage board with realistic peg movement.

PRICE: \$29.95

#### **TITLE: DERBY DOWNS**

**PUBLISHERS NAME: RAFF CRAFT**

**DESCRIPTION**

- \* Wager on your winning horses.

- \* Examine racing forms- Jockeys' records.

- \* Select daily doubles, across the boards, quinellas, exactas.



- \* Pull in your winners as you watch each race.
  - \* Computer keeps tab on your "Daily Total Earnings."
  - \* 1-10 players.
  - \* Computer stores results from previous races in the form sheet.
  - \* Each race is unique- lineups are different.
- PRICE: \$30.00**

**TITLE: GAMES PEOPLE PLAY**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION** Let's admit it, life is too short not to have a little pure fun. This neat game package will entertain you, it will make you laugh, it will make you cry, and you'll be having just too much fun to go to bed. Johnny Carson, watch out! The family game package includes Vegas Computer, Roulette, Acey Ducey, Hex Pawn, Sevens, Awari, Dat-at the Track and Othello.

**PRICE: \$25.95**

**TITLE: HEARTS 1.5**

**PUBLISHERS NAME: DYNACOMP, INC.**

**DESCRIPTION** An exciting and entertaining computer version of this popular card game. Hearts is a trick oriented game in which the purpose is not to take any hearts or the queen of spades. Play against two computer opponents who are armed with hard to beat playing strategies.

**PRICE: \$14.95**

**TITLE: HORSE RACE HANDICAPPING SYSTEM**

**PUBLISHERS NAME: 3G COMPANY, INC.**

**DESCRIPTION** This is a scientifically derived system that really works! The system is based on storing data from a large number of races on a high-speed, large scale computer. Twenty-three factors taken from the "Daily Racing Form" were analyzed by the computer and ten were found to be most vital in determining winners. Numerical probabilities of these ten factors were computed and this forms the basis of the program. It is simple to use. Obtain the "Daily Racing Form" the day before the races and answer the ten questions on each horse in each race. The computer will print out the odds for all horses in each race. Computer power gives you the advantage. Cassette, instructions, listing, and tips are included in the package.

**PRICE: \$24.95**

**TITLE: POKENO**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION** A modern computer version of an old popular parlor game called 'poker squares'. Hi-Res cards are dealt one at a time and you arrange them in a 5x5 grid to maximize 10 different poker hands across and down. compete against others, or your own high score.

**PRICE: \$12.95 Tape**

**\$17.95 Disk**

**TITLE: POKER SLOT MACHINE/HI-RES PLAYING CARDS**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION** Enjoy this simulation of the poker slot machine in Vegas. Win money by getting the best hand possible. Also includes instructions and demo program on how to use these Hi-Res cards in your own programs.

**PRICE: \$17.95**

**TITLE: PRO FOOTBALL****PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION** Never before has there been a program that can predict such unbelievably accurate pointsreads with the APPLE II. This program was fully tested during the 1978 season and it consistently beat the experts. You may predict real or hypothetical games within seconds from data saved on cassette or disk. The data file requires only 10 minutes per week to maintain and will instantly give you a complete rundown of the season's activity. PRO FOOTBALL has many special features such as Cassette Load and Save. Disk Load and Save, Team Review and Update, Summary of Predictions, and much more. Each program includes a complete prior season Data File.

**PRICE: \$21.95 Cassette, \$26.95 Disk****TITLE: THE GOLD EDITION****PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION** After four years of research, development, and testing, SPL is proud to present "The Gold Edition"- A system that predicts pro football point spreads with a degree of accuracy that has never been obtainable until now. From weeks 6-16 during the 1980 and '81 seasons The Gold Edition has been a proven winner in all categories over the Las Vegas line:

SEASON	FAVORITES		UPSETS	TOTAL TOTAL GAMES				
	HOME	AWAY		HOME	AWAY	HOME	AWAY	
1981 SEASON	57%	80%		63%	70%	59%	71%	154
1980 SEASON	53%	67%		79%	66%	61%	66%	154
TWO YEAR AVG:	55%	73%		66%	68%	60%	68%	308

**PRICE:****TITLE: THE RACE TRACK (NEVADA VERSION)****PUBLISHERS NAME: A2 DEVICES**

**DESCRIPTION** You pick your horses (no graphics this time) and the greatest horses of all time race...pay off odds and names appear on the tote board so that the lucky winners will know if they have won. One or several may play this game of the Sport of Kings. Will you be lucky?

**PRICE: \$3.00****TITLE: THE STRIP****PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**DESCRIPTION** Pretend you're in Vegas playing the slots with "Vegas Computer", and the wheel of fortune spins with "Roulette". For a fast pace, add "The Great Chase"

**PRICE: \$25.00****TITLE: THE WORLD'S GREATEST BLACKJACK PROGRAM****PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION** The program combines high-resolution graphics with a professional card counting system to teach you the best betting and playing strategy. It turns your Apple into your own home blackjack casino, complete with built-in dealer and opponents. Based on The World's Greatest Blackjack Book by Dr. Carl Cooper and Dr. Lance Humble, the program coaches you in blackjack basics as well as the Hi-Opt I card counting strategy. Unlike other professional systems, Hi-Opt only requires you to count three card categories, so even the casual user can gain proficiency with it.

You can use the program to practice whenever you want, or let your Apple deal the cards and tally bets for your next game among friends.

This program:

- \* Allows you to choose from nine standard sets of rules (from Las Vegas, Reno, Atlantic City, and the Bahamas), or to introduce other standards so you can simulate the rules at any casino;
- \* teaches basic blackjack strategy as well as the Hi-Opt card counting system so you acquire professional-level blackjack tools;
- \* measures response time to quiz questions and brings back problems that held you up the longest so you get extra practice at troublesome blackjack situations;
- \* acts as the dealer for you and up to five other real or imaginary gamblers so you can use it for both social and solitary play.

Simply add your name, strategy, and stake to its built-in list of programmed players, then enter the Play Blackjack command. A high-resolution color display will appear on the screen while the computer shuffles the cards, asks for bets, and then deals. When it's your turn, you can choose any standard casino option - hit, stand, double, pair-split, cash in on a natural, or ask for insurance. The program allows you to change the rules of the players automatically. You can either set up your own rules or choose from pre-set options.

Two built-in practice drills help you learn advanced playing techniques that can improve your game. The Strategy Drill teaches both basic strategy and Hi-Opt I system in a step-by-step instruction program. The Count Drill helps you build speed and expertise with Hi-Opt counting, so you'll be ready for even the fastest dealer. Your cards are quickly displayed on the screen and then erased, so you only get a brief look at each. You control how fast the cards appear - up to 75 hands per minute.

PRICE: \$50.00

#### **TITLE: TURF ANALYSIS**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION** Take the guesswork out of handicapping with this new and easy way to handicap horse racing on APPLE II. This program provides incredibly accurate predictions through the use of Multiple Regression and you don't have to know statistics to use it. You select the variables and enter your data and the program quickly does the rest. If on a rare occasion you make a mistake, don't worry, the program has a data correction section to take care of it. You may use as many variables and as much data as you like, you're only limited by the available memory of your computer. TURF ANALYSIS has been fully tested and more often than not, it will beat the experts.

PRICE: Tape, \$21.95

Disk, \$25.95

#### **TITLE: WIN AT THE RACES**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION** WIN AT THE RACES is a NEW thoroughbred handicapping program that employs the formulas of a currently popular book whose author has done extensive research into the methods of thoroughbred handicapping. In each race, this program generates the probability and the probable betting odds of each horse and the results are listed in descending probability order. Since this program provides optional hardcopy printout, you may take your computer listing to the track and compare the track betting odds with your own. This system has been used by thousands of

handicappers with outstanding results. If you're a serious thoroughbred handicapper then this program is an ABSOLUTE MUST. Program is now available at your local dealer or directly from SYSTEMS DESIGN LAB...BUT ORDER EARLY!  
**PRICE: \$34.95 Cassette, \$39.95 Disk**



## STRATEGY GAMES

### **TITLE: A STELLAR TREK**

#### **PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION:** The definitive high resolution COLOR version of the classic Startrek game. A STELLAR TREK is a computer game which utilized the unique features of the Apple II Computer to bring to the game enthusiast a colorful, exciting battle simulation. Three different Klingon opponents...The Romulan Star Empire has joined forces with the Klingon Empire...your battleground is the entire galaxy. You have many command prerogatives; movement throughout the galaxy, use of starship weaponry, maintenance of energy reserves, repair of incurred damages, and more. Comes with a 22 page set of descriptive and instructive material.

**PRICE: \$24.95**

### **TITLE: A2-FS1 FLIGHT SIMULATOR**

#### **PUBLISHERS NAME: SUBLOGIC COMMUNICATIONS, INC.**

**DESCRIPTION:** Gives you a real-time, 3-D, out-of-the-cockpit view of flight. The non-pilot can now learn basic flight control, including take-offs and landings. And experienced pilots will recognize how thoroughly they can explore the aircraft's characteristics.

Once you've acquired flight proficiency, you can engage in the exciting British Ace 3-D aerial Battle Game included in the package. Destroy the enemy's fuel depot while evading enemy fighters.

#### **SPECIAL FEATURES:**

- \* 3 frame-per-second flicker free animation
- \* Keyboard or joystick input

**PRICE: \$25.00   Cassette**  
**\$33.50   Disk**

### **TITLE: AIR TRAFFIC CONTROLLER**

#### **PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** You won't believe how it feels to control all of an airport's air traffic until you try it! Guide in landings, stop hijackings, avoid UFO's, check computer read-outs, etc. Great explosions and machine language sounds.

**PRICE: \$12.95**

### **TITLE: ADVENTURE TO ATLANTIS**

#### **PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Adventure to Atlantis combines the best features of adventure games, arcade games, and fantasy role playing games. In Adventure to Atlantis you must solve puzzles, plan strategies, and survive a variety of combat situations. Over a year of research went into producing this new style of adventure game.

Adventure to Atlantis is a sequel to Odyssey: The Complete Adventure, a game Synergistic Software first released in 1980. Adventure to Atlantis takes up where Odyssey leaves off: The struggle between the forces of magic (The High One) versus the forces of science (the Atlanteans) continues. Adventure to Atlantis uses four methods to grab the player's attention as the game progresses; high-resolution color graphics and animation, sound effects to enhance the action, random events at all stages of the adventure, and embedded arcade-like action. With the random events feature a whole new world is created every time the game is played. This keeps the challenge of the Adventure unique and fresh; never repetitious.

**PRICE: \$40.00**

**TITLE: PASEBALL****PUBLISHERS NAME: MUSE SOFTWARE**

DESCRIPTION: Bring the excitement of Major League baseball to your Apple II. Baseball is a high resolution action game with outstanding player control. Strikes and outs are tallied and a scoreboard is displayed after every batter. So get up to bat, watch out for those slow pitches, hit the ball and hope that the opposing team does not catch it. A challenging game and a must for sports fans.

PRICE: Tape, \$14.95

**TITLE: BOWLING/TRILOGY****PUBLISHERS NAME: INSTANT SOFTWARE**

DESCRIPTION: Enjoy two of America's favorite games transformed into programs for your Apple:

Bowling - up to four players can bowl while the Apple sets up the pins and keeps score. Requires Applesoft II.

Triology - This program can be anything from a simple game of tic-tac-toe to an exercise in deductive logic. For one player.

PRICE: Tape, \$7.95

**TITLE: CARTELS & CUTTHROATS****PUBLISHERS NAME: STRATEGIC SIMULATIONS**

DESCRIPTION: A strategy game designed to tax your business sense by putting you in charge of your own multi-million-dollar manufacturing plant. Armed with up-to-date newswires, market summaries, profit & loss statements and special memos from your department heads, you make the executive decisions. You must confront the problems of an unsteady economy fraught with inflation and high interest rates, tough labor demands and government interventions. Designed for one to six players, with the computer playing up to five positions if you desire. Cartels & Cutthroats provides a full range of options- from easy-to-play games for beginners, to an advanced version that will stump even experienced businessman.

PRICE: \$39.95

**TITLE: CASTLE WOLFENSTEIN****PUBLISHERS NAME: MUSE SOFTWARE**

DESCRIPTION: An action-adventure game that bridges the gap between arcade-type games and the more complex adventure/fantasy games. Castle Wolfenstein delivers a combination of fast play and intellectual challenge, therefore creating an entirely new category of computer game.

The Castle Wolfenstein scenario puts the player in the role of an Allied soldier as World War II rages across Europe. The castle itself is a magnificent Old World fortress which has been occupied by the army of the Reich and converted into battlefront headquarters. The player, who has been captured and brought to Castle Wolfenstein for interrogation, is secretly handed a fully-loaded stolen pistol by a dying cellmate. The player then assumes the game challenge: to find the Nazi war plans hidden in the castle and to escape without being recaptured or shot by the dreaded SS.

PRICE: \$29.95

**TITLE: CHECKERS****PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**

DESCRIPTION: Requires Applesoft or Applesoft II BASIC.

This is the APPLE version of the popular board game, with color graphics. Test your strategy against the computer. The computer does not look ahead for future moves, hence it is best suited for beginning players.

**PRICE:**

**TITLE: CHESS**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Try your skill at this ancient game of strategy. Plays at eight levels of skill, so you're always evenly matched.

**PRICE: \$25.00 Disk**

**\$20.00 Tape**

**TITLE: CHESS CONNECTION**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Play Hi-Res chess with a friend over the phone! Each move instantly displayed on both Apples - can save or load previous games - built in chat mode - only one side needs copy of program.

**PRICE: \$35.00**

**TITLE: COLORBLIND**

**PUBLISHERS NAME: ENERGY GAMES**

**HARDWARE REQUIREMENTS:** Game paddles

**DESCRIPTION:** A two player, sea battle game. Uses color filter goggles to hide opponent until in line-of-sight. A great action/strategy game.

**PRICE: \$34.95**

**TITLE: COLORMASTER**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** Test your powers of deduction as you try to guess the secret color code in this Mastermind-type game. There are two levels of difficulty, and three options of play to vary your games. Not only can you guess the computer's color code, but it will guess yours! It will also serve as referee in a game between two human opponents. Can you make and break the color code...?

**PRICE:**

**TITLE: COMMBAT**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** COMMBAT is a strategic and tactical battle game that will allow you (interacting through your computer) to pit your skill and dexterity against another player and their computer in a real-time battle to the death!

You and your opponent are located in a 4096-square-kilometer combat reservation with exactly the same resources available to each, the outcome to be governed only by the skills of the players. As soon as you have established serial communication with your enemy (110 to 9600 baud modem or direct connection, the battle begins! You decide which weapons to carry, then load them onto and maneuver up to eight remote controlled tanks with the primary goal of finding and destroying your enemy's base before he can do the same to you. Each enemy tank that you can defeat in combat lessens his chances of finding you.

Offensive and defensive weapons available to you include: rockets, lasers, shells, mines, decoys, drone reconnaissance aircraft and one nuclear ICBM. All but the last two items may be

loaded onto, carried by and fired or dropped by your tanks, up to their maximum load-carrying capacity. Your computer displays current resource status, a map of the combat reservation updated by tank, base and decoy sensors, and handles all communication chores, freeing you to make the strategic decisions and handle the tactical battle situations that arise.

COMBRAT requires two computer systems, each with a RS-232 port and a 300 baud full duplex modem.

**PRICE: \$24.95**

**TITLE: COMPUTER ACQUIRE**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** The object of the game is to become the wealthiest person in this "Business" game about hotel acquisitions and mergers. For 2 to 6 players it is a subtle game of interplayer strategy. As a SOLITAIRE game you play against the computer. One can even pit the computer against itself in this faithful recreation of the classic board game.

**PRICE: \$20.00 Cassette**

**\$25.00 Disk**

**TITLE: COMPUTER AIR COMBAT**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** With Computer Air Combat, your screen lights up with an open sky generated by Hi-Res graphics offering global and tactical plots. Squint your eyes a bit, let loose your mind, and you would swear your keyboard has melted into the throttle, rudder, altimeter, and other cockpit instrumentation of a World War II combat plane. In fact, any of 36 famous fighters or bombers, from a Spitfire and P-17 Flying Fortress to the Focke-Wulf 190 and A6M5 Zero. Each plane is rated - in strict historical accuracy and detail - for firepower, speed, maneuverability, damage-tolerance, and climbing and diving ability.

**PRICE: \$59.95**

**TITLE: COMPUTER AMBUSH**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** Strategic Simulations announces Computer Ambush for Apple II or Apple II Plus. The game features everything needed to simulate World War II squad combat, including a hi-res display of a French Village.

**PRICE: \$59.95**

**TITLE: COMPUTER BASEBALL**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** It's a computer strategy game so thorough yet so easy to use you'd swear you're managing a live team.

It lets you enter extensive player statistics so you can create any team you like- from the neighborhood hackers to the great 1944 St. Louis Browns!

It gives you over 25 strategy options to choose from, options so complete you have to remember to warm up relief pitchers in the bullpen.

Its color Hi-Res graphics display has enough animation to give you a good feel for the flow of the game.

As a clincher, Teams Data Disks for 1980 and 1981 are available if you want to use real AL and NL teams of those seasons.

**PRICE: \$39.95**



**TITLE: COMPUTER BISMARCK****PUBLISHERS NAME: CALIFORNIA PACIFIC COMPUTER CO.**

**DESCRIPTION:** Historical wargaming may be the only intellectual hobby which creates more intensely devoted fanatics than home computing. When two wargamers spend an evening refighting a famous battle, they'll spend several hours happily setting up the gameboard, firepower charts, unit strength tables and so forth & pencil simulations of every famous battle from Shiloh to F1 Alamein. If you've ever tried one, you already know the excitement and challenge of trying to be a better general than Rommel.

HOME COMPUTER

**PRICE: \$59.95****TITLE: COMPUTER CONFLICT****PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** Computer Conflict actually consists of two fast-moving wargames of modern warfare, REBEL FORCE and RED ATTACK!, both of which can be enjoyed by wargamers and non-wargamers alike. Using hi-res hexagonal mapboards and realistic unit silhouettes, these games are the most colorful strategy games we have produced to date. Both games can be played in less than one hour, and the set will appeal to all you regular game customers.

**PRICE: \$39.95****TITLE: COMPUTER NAPOLEONICS****PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** COMPUTER NAPOLEONICS takes you to the battlefields of Waterloo on the fateful day of June 18, 1815. Here, the greatest battle ever fought is about to begin, awaiting only your commands to set the amassed armies in motion.

You and your friend choose your role - either as the military genius, Napoleon, or as the Duke of Wellington, the iron-willed leader of the Anglo-Allied forces. The video screen displays the map of the Belgian countryside with the artillery, infantry, and cavalry units under your respective commands.

As Napoleon, you must utilize your superior combat strength and numbers to deal Wellington a quick and decisive defeat before his Prussian ally can supply reinforcements. Speed is of the essence. But any tactical blunders in military deployment will result in a repeat of history - Napoleon's ignominious defeat.

AS THE DUKE OF WELLINGTON, you must not only survive the onslaught of the French artillery, cuirassiers, and the dreaded Imperial Guard, you must also inflict sufficient damage to Napoleon's forces to prevent his relentless northward march of conquest.

**PRICE: \$59.95****TITLE: COMPUTER QUARTERBACK****PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** COMPUTER QUARTERBACK propels you onto the playing field of the Super Bowl. From its multiple offensive and defensive plays and its real-time playing conditions to the animated video display of the gridiron and the halftime statistics, no strategy football game has ever been more complete in detail or as exciting in realism. Three versions are offered: Semi-Pro, Pro, and Computer-as-Opponent.

SEMI-PRO presents you with a choice of 18 offenses and 14 defenses. Here you will begin to learn the intricacies of

football; the thrill of the perfectly executed two-minute drill; the agony or the fumble, interception, and penalty. On offense, you will learn to read the defense and call audibles as needed. After you have mastered the Semi-Pro version, it's time to move on to the Big Time ... the Pro version!

**PRICE: \$39.95**

**TITLE: CYTRON MASTERS**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** CYTRON MASTERS puts you in command of any army of robots, or cytrons, who battle other cytron armies to settle planetary disputes.

Each army consists of laser-blasting shooter units, kamikaze-like mine cytrons, and devastating guided missiles. For defense, there are mobile bunker cytrons and anti-missiles. As Cytron Master, you have energy centers at your disposal to build different types of cytrons. You may capture your enemy's energy centers and increase your power. Victory is yours when you cross the battlefield and destroy your enemy's command center.

The action is fast-paced, and the animation and sound effects are terrific. There are three speed levels which allow a player to learn to control his cytrons before taking on a more experienced Cytron Master. There is also a missile-anti-missile scenario where you practice control of your two most important weapons in arcade-like action.

The game includes two-player and computer-as-opponent games modes.

**PRICE: \$39.95**

**TITLE: DARK FOREST**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** Dark Forest is a new game of strategy and conquest for one to six players. Three of your kingdom's most valued treasures are missing and you must comb the countryside to recover them. The treasures are hidden inside castles located in several different territories. In order to enter and search a castle you must first conquer the territory surrounding the castle. You must battle the Gruds and other players for possession of the territories.

You can play on any one of four colorful maps. The status of each territory and castle is constantly updated and displayed on the map. Moves are entered through simple keyboard commands and battle reports are printed at the top of the screen.

Dark Forest is a game of strategy which pits you against Trolls, Magicians, Sea Serpents, Spectres, Gruds and up to five other players. You can choose from any of eight levels of difficulty. Games can be saved and restarted later.

**PRICE: \$29.95**

**TITLE: DOCTOR CHIPS**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** A great icebreaker at cocktail parties. And if the need arose, he could entertain your early arriving guests while you finished dressing. Your friends will be asking you how the guy got into the computer.

Why shoulder the burdens of modern life in silence? Put your Apple and Dr. Chips to work today and get it all off your chest.

**PRICE: \$14.95**

**TITLE: DOOM CAVERN/SORCERER'S CHALLENGE**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Hi-Res version of the popular dungeons and dragons type role-playing game. Establish the strength, intelligence, etc., of your party, then explore the complex dungeon. Second game is a duel of mighty spells between two powerful magicians. Use strategy and tactics to defeat your opponent.

**PRICE: \$20.00**

**TITLE: EMPIRE 1: WORLD BUILDERS**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** The EMPIRE gaming trilogy is a projection into a future where the rise and fall of an intergalactic civilization plays out over light years of time and space.

**PRICE: \$32.95**

**TITLE: ENCOUNTER**

**PUBLISHERS NAME: CLONE SOFTWARE**

**DESCRIPTION:** It's more than just a game. It's an adult comedy. It's a parody, a satire - it's the penultimate experience!

A computer interview determines your romantic mood. Then the computer selects a "Lewd"-a personalized surprise suggestions for your enjoyment. There's no "manual" to reveal the suggestion in advance - every Lewd is buried in the program, awaiting the proper moment.

But that's not all. You can even enter your own Lewds! Place your wildest desires in the computer! Surprise your mate.

Order today, and you'll also get a hearty program that interrogates your innermost appetites and then selects the perfect pizza to satisfy you - at no extra charge

**PRICE:**

**TITLE: EXTRA SENSORY PERCEPTION/E.S.P.**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** In still, small hours of the morning, have you ever wondered about Extra Sensory Perception? This enlightening and fun filled game gives you the chance to find out whether you and your friends possess these seemingly magic powers. One program tests for telepathic skills, another for Psychokinesis (the influencing of the behavior of inanimate objects and phenomena).

**PRICE: Cassette, \$9.95**

**Disk, \$15.95**

**TITLE: FASTGAMMON**

**PUBLISHERS NAME: QUALITY SOFTWARE**

**DESCRIPTION:** Sound, hi-res color, and cartoons have helped make this the most popular backgammon playing game for the Apple II. But don't let these entertaining features fool you - FASTGAMMON plays serious backgammon. Requires at least 24K of RAM.

**PRICE: \$19.95, Cassette \$24.95, Diskette**

**TITLE: FOOTBALL**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A Low Resolution Graphics simulation of the popular electronics game. Two Players alternately choose Running, Passing or Kicking plays in an effort to score a Touchdown or Field Goal against the Apple-Controlled Defense.

**PRICE: \$24.95**



**TITLE: FOUR-IN-A-ROW****PUBLISHERS NAME: NIBBLE**

DESCRIPTION: An interactive Low-Resolution Graphics game of skill and strategy. You'll try to beat your Opponent to a Four-In-A-Row line of blocks to win. Watch the force of Gravity drop the blocks through the grid as each player struggles for a Win.

PRICE: \$29.95

**TITLE: GALACTIC EMPIRE****PUBLISHERS NAME: BRODERBUND SOFTWARE**

DESCRIPTION: Even in the distant future men are faced with the one seemingly immutable law of the universe: man cannot travel faster than light. Thus the genius of military leadership remains unchanged from pre-atomic times: it is not a matter of shooting straight nor of being able to maneuver a spaceship through the increasing complexities of microcomputer space. The test of true military genius, as always, lies in the facility for total planning. Military success is a matter of logistical coordination, of delivering ships and men to the right place at the proper time.

PRICE: \$24.95

**TITLE: GALACTIC REVOLUTION****PUBLISHERS NAME: BRODERBUND SOFTWARE**

DESCRIPTION: "Those who make peaceful revolution impossible will make violent revolution inevitable." (A prominent Earth leader of the Atomic age.) In this realistic simulation players may choose to ignite or suppress the impending revolution by implementing social changes on worlds they control in order to sway the allegiances of various power groups throughout the galaxy and thereby acquire the resources and production capabilities to build a military success.

A game for 1 to 3 players with quick pacing and many complex strategies which guarantee hours of pleasure. Advanced complexity but not difficult to play. Playing time 1 to 3 hours. Comes with 32 page book of rules, strategies, manipulated historical facts, and revolutionary theory. Minimum configuration.

PRICE: \$24.95

**TITLE: GALACTIC TRADER****PUBLISHERS NAME: BRODERBUND SOFTWARE**

DESCRIPTION: If the military life is not your style, if cutting deals appeals and barter is your bag, then your game is trade. And there's no game like galactic trade! As in Galactic Empire, your screen's sophisticated graphic display will help you keep tabs on all the action. Your viewport fills with stars and nearby planets as your CRT (a computer within the computer!) displays starmaps and trade records, performs fuel calculations, and provides general cerebral support. Real time action keeps the pressure on as you zip through space!

PRICE: \$24.95

**TITLE: GAME PACK #3****PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE****DESCRIPTION:**

1. MAGIC PACK: Four brain-bending tricks in one great magic show! Only you and your Apple know how these amazing tricks are done!
2. SLIPPERY DIGITS: A challenging number-action game; a great



demo of your Apple's capabilities.

3. OINK!: A nerve-racking dice game with unpredictable results.  
PRICE: \$24.00

**TITLE: GAME PACK #4**

**PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE**

**DESCRIPTION:**

1. BUZZWORD: For kids of all ages! Your Apple types a story and you insert the missing words; OR you create a story with Apple's help. Save your stories to disk.
2. TRIPLE DIGITS: A plan-ahead numbers game. Stimulates some real thinking about numbers.
3. CORN GAME: For kids, a guessing game involving 3 farm animals & an endless supply of corn.

PRICE: \$24.00

**TITLE: GENIUS**

**PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**

**DESCRIPTION:** In each round of this game, you are given a potpourri of 5 trivia questions to answer as quickly as possible. Any final score above 400 will merit a rating of genius, but watch out! There's a 25 point penalty for each wrong answer. The quiz includes questions about movies, sports, TV, literature, general knowledge, and of course, computers.

PRICE:

**TITLE: GLOBAL WAR**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** This popular cassette game is now available on diskette! Global War is a challenging computer assisted game for two to nine players. The computer does not function as a player, but acts as a score keeper, arbitrator and as a source of information for the players. Global War features a detailed high resolution drawing of the earth's continents divided into 42 regions. The game begins with the computer assigning each player a portion of the regions and starting armies. The players can allocate armies to specific regions or attack another player's territory. The object of the game is to invade and occupy all 42 territories. This is done by challenging opponents in a computer simulated battle, and occupying their territories. The game ends when one player holds all 42 territories. You can save the current game on disk at any time and restart it later at the same point.

PRICE: \$24.95

**TITLE: GOLF**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** Without leaving the comfort of your chair, you can enjoy a computerized 18 holes of golf with a complete choice of clubs and shooting angles. You need never cancel this game because of rain. One or two players can enjoy this game.

PRICE: \$7.95

**TITLE: GREEN BERET**

**PUBLISHERS NAME: COMPUTER GAMES**

**DESCRIPTION:** Run a mission behind the lines, in North Vietnam. Blow up bridges, kidnap politicians, raid prison camps. You are the team commander.

PRICE: \$19.95

**TITLE: GUNS OF FORT DEFIANCE****PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** This game puts you in command of a Napoleonic era artillery piece and its crew attempting to repel a series of attacks by infantry, cavalry or artillery. Not just another "shooting gallery" to test your reflexes, this game requires you to master the "gunner's art" as practiced in the early 19th century. As your Crew goes through the steps of the actual drill involved in loading and firing, you will have to determine...

- a type of ammunition appropriate for the target,
- the correct fuse length for shell or spherical case,
- the elevation adjustment corresponding to the range for direct or rolling fire,
- the deflection needed to put each shot where it will do the most good.

**PRICE: \$20.00****TITLE: HAUNTED HOUSE****PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**

**DESCRIPTION:** It is 6:00 and you have until midnight to find the secret passageway out of a haunted house. During your search, you may find skeleton keys to open locked doors, good luck charms, friendly ghosts, evil spirits, and skeletons. The sound effects (creaking doors and stairs) add to the eeriness. The house layout changes in every game.

**PRICE:****TITLE: HI-RES COMPUTER GOLF****PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Up to four golfers can play an 18-hole round of golf with all the aspects and fun of the real thing.

**PRICE: \$29.95****TITLE: HI-RES FOOTBALL****PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** Strategy and skill are combined as you call the plays and control the players in this exciting real time action game. It allows you to run, pass, kick, sack the quarterback, or fake-out the defense - all in fully animated Hi-Res Graphics. You can play against the computer or a human opponent.

**PRICE: \$39.95****SOFTWARE****TITLE: HI-RES SOCCER****PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** A real-time action Soccer game. All plays are shown in full Hi-Res Graphics.

- Fully animated players
- Play against the computer or against a friend
- 3 levels of play
- Real-Time clock, realistic sound effects
- 8 players per team
- Hi-Res scoreboard
- Realistic Soccer play - both indoor and outdoor Soccer rules

**PRICE: \$29.95****TITLE: INTERACTIVE FANTASIES**

frequently the posthumous and tight tummy.)

**PRICE: \$29.95**

**TITLE: JET FIGHTER PILOT**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** Takes you as close to real combat flying as possible, without pulling G's. You become the pilot of a high performance, twin turbo-jet fighter. Total control of the aircraft is yours.

At the start of your mission, you'll go through an entire engine start procedure before your flight (provided your ground maintenance is up to par). Your takeoff will be either the deck of an aircraft carrier (via a steam catapult) or from an airfield.

**PRICE: \$19.95**

**TITLE: LOW SCORE II**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A Hi-Resolution graphics game of Skill and Strategy. Try to beat your Apple to the Lowest Score to Win! The Shapes are applicable to your own programs.

**PRICE: \$28.95**

**TITLE: MAJOR LEAGUE BASEBALL**

**PUBLISHERS NAME: ABW CORP.**

**DESCRIPTION:** Strategy game based on real Major League teams. You manage the 1980 teams and make all lineup, hitting, pitching, and running decisions. Includes all 26 teams with 25 players per team. Also includes utility programs to make and modify your own teams.

**PRICE: \$25.00**

**TITLE: MAZE GAME**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Set the size and difficulty level of your maze and watch as it is randomly generated. Every maze is different. Special graphics place you inside a colorful 3-D maze. Player options include getting a maze map, having a compass available, and leaving retraceable footprints on the maze floor. A challenging game for all ages.

**PRICE: \$12.95 Cassette**

**TITLE: MICRO LEAGUE BASEBALL**

**PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** Finally...a hi-res Baseball that's as good as the Apple!

\* 8 different pitches, 6 different swings

\* 3-D effect on fly balls

\* Player controlled fielding and throwing

\* Vocal umpire

\* Complete electronic score board

\* Beautiful stadium in full color

**PRICE: \$24.95**

**TITLE: MICRO OTHELLO**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION:** Traditional OTHELLO game with some added features. You can play against another player or the computer. Has four

levels of play ranging from beginner to expert. You may choose black or white, and whether or not you wish a handicap. Allows you to: print-out a game, replay a game at any point switch from player vs. player to player vs. computer or (vice versa) at any point. Test your expertise at Level 4, which is very difficult to beat. In Hi-Res graphics.

**PRICE: \$ 9.95**

**\$14.95**

**TITLE: MIDWAY CHAMPAIGN**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** Your computer controls a huge force of Japanese ships whose objective is to invade and capture Midway Island. In the actual engagement, the Japanese made several tactical errors which cost them the battle. Your computer probably won't make the same mistakes! You command the badly outnumbered and outranged U.S. Naval Forces. Your only advantage is surprise.

**PRICE: \$15.00 Cassette**

**\$20.00 Disk**

**TITLE: MIMIC**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** How good is your memory? Here's a chance to find out! Your Apple will display a sequence of figures on a 3 x 3 grid. You must respond with the exact same sequence, within the time limit.

There are five different, increasingly difficult versions of the game, including one that will keep going indefinitely. Mimic is exciting, fast paced and challenging fun for all!

**PRICE: \$9.95**

**TITLE: NAPOLEON'S CAMPAIGNS: 1813 & 1815**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** This is a hardcore strategist's dream-come-true; a dedicated gamer can truly appreciate the amazing detail and design efforts we've put into this Napoleonic simulation.

**PRICE: \$59.95**

**TITLE: NUCLEAR REACTION**

**PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**

**DESCRIPTION:** Nuclear Reaction is an exciting strategy game for two players. Each player, in turn, places a particle of radioactive material on a 6x6 board. When the number of particles at a location reaches its critical mass, it explodes, sending a particle of adjacent squares. As the board fills up, a single explosion can cause the right chain reaction to wipe out all your opponent's pieces. Nuclear Reaction is a game of skill, fast decisions, and quick reversals, making it fun to play for many hours. Action sound effects.

**PRICE:**

**TITLE: NUKEWAR**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** NUKEWAR is a computer simulation of a nuclear confrontation between two hypothetical countries. You must choose the methods to defend your country: either by massive espionage efforts, or by building jet fighter-bombers, missiles, submarines, and anti-ballistic missiles. Meanwhile, your cold and calculating computer will choose its own strategy to defend



its country while also trying to destroy you utterly! NUKESWAR is very fast-paced and easy to learn, and can be enjoyed equally by game players of all ages and levels of experience. Best of all, once the nuclear war is over, you can bring the two countries back to live and try it again!

**PRICE: \$15.00**

**TITLE: OIL TYCOON**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** Could you be the world's wealthiest oil magnate? Find out with this action packed simulation of the real world, cut-throat competition.

**PRICE: \$9.95**

**TITLE: OLYMPIC DECATHLON**

**PUBLISHERS NAME: MICROSOFT**

**DESCRIPTION:** There's never been a program that tests your reflexes and coordination like Olympic Decathlon. Just like the real one, Microsoft's has 10 events, including shot put, pole vault, long jump, javelin throw, and six more. Winning takes a combination of strategy, timing, coordination, and physical endurance (really!). When you jump or throw, the program calculates the actual trajectory, and shows you what's happening with exciting animated graphics. After each event, the scores of all competitors (up to 8) are displayed. It's the ultimate party game to show off the computer!

**PRICE:**

**TITLE: OPERATION APOCALYPSE**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** Carries you to the Western Front Circa 1944. There you can re-enact the various facets of the Invasion of Europe in four separate scenarios, each offering different victory conditions, personnel ordinance and terrain. The action takes place on a 7-by-18 hexagon mapboard dotted with hills, rivers, bridges, forests and towns. As the Allied General, you can order off-screen artillery bombardment to soften up German resistance, or call upon airborne landing behind enemy lines to capture key bridges or wreak havoc on the communications network. As the German High Command, you must prevent the Allies from gaining a firm foothold on the continent by wiping out their airborne and amphibious landings. Sever the highways and bridges to Germany and you'll cripple the Allied advance.

**PRICE: \$59.95**

**TITLE: OTHELLO**

**PUBLISHERS NAME: CREATIVE SOFTWARE**

**DESCRIPTION:** You've seen it elsewhere, but on the Apple it's simply great.

**PRICE: \$19.95**

**TITLE: PERCEPTION PACKAGE**

**PUBLISHERS NAME: EDUWARE SERVICES**

**HARDWARE REQUIREMENTS: Paddles**

**DESCRIPTION:** Includes three PERCEPTION exercises on an attractively priced diskette.

**PRICE: \$19.95**

**TITLE: PLANET MINERS****PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** PLANET MINERS gives one to four players the chance to compete with each other and the computer to stake valuable mining claims through the solar system in the year 2050. Each player must decide which ships to send to which planets and when to try "dirty tricks" like sabotage and claim-jumping. If there are less than four players, the computer takes the other parts. (It can even play all by itself!) Thus, PLANET MINERS can either be played solitaire or with friends.

**PRICE: \$15.00****TITLE: REVERSAL****PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Winner of the software division of the First International Man Machine OTHELLO (TM) Tournament, this version of the 200 year old game Reverse features 27 levels of play and high-resolution color graphics. Written by the authors of SARGON II!

**PRICE: \$34.95****TITLE: RICOCHET****PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** You've got two launchers you fire at your opponent's goals. There are obstacles in your path, but you get points for banking your shots off of them before they reach the goal. The longer the shot, the more points you get.

In the long run, you're trying to rack up points for your personal Ricochet Rating. You are assigned a rating (by your computer), based on how well you play against your computer opponent or against another human. Your rating improves when you win the match.

**PRICE: \$19.95****TITLE: ROBOT WAR****PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Action-filled battle between two to five robots, players have no control over the robots once the battle starts. But each robot must have had its microcomputer brain programmed by a human before it can take to the battlefield. Once in battle, the winner is the robot running the most effective battle strategy program. Robot's brains contain and accumulator, a pair of index registers, twenty-six memory registers, and seven input/output registers that control radar scans, aiming, shooting, assessing damage, and moving. You may program up to 256 instructions into one completed robot's computer-brain, disk.

**PRICE:****TITLE: S.E.U.I.S.****PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** S.E.U.I.S. (an acronym for Shoot 'Em Up In Space) is more than the name suggest.

Players build ships from a choice of six prototypes to form squadrons and then make enough squadrons to form a fleet. The game includes planets, some of which belong to the player at the start of the game and others which may be conquered. Planets, the source of new ship construction, can be varied in their productivity. Conquered planets can be used to build up reserves for reinforcements.

The strategic game, with all the planning and deployment will

challenge every gamer. But when actual ship-to-ship combat occurs, the true arcade action demands quick reflexes and a sharp eye.

S.E.U.I.S. offers a variety of scenarios, complete with two-player or computer-as-opponent modes. For a fast, arcade-like game, there is a real-time tactical combat scenario.

**PRICE: \$39.95**

**TITLE: SAHARA WARRIORS**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**HARDWARE REQUIREMENTS: game paddles**

**DESCRIPTION:** Now you can enjoy all the gritty realism of desert warfare with the Sahara Warriors package.

**\*COMMANDO** - You must send your commandoes to trap a German general and cut him off from his troops. You'll have the choice of two levels of difficulty.

**\*FRENCH FOREIGN LEGION** - The battalions of the French Foreign Legion are in a race with the Arabs. Which side will get its battalions into the oasis in the shortest time? You and a friend can find out. This game has four different versions, which even include an occasional sandstorm.

**PRICE: \$9.95**

**TITLE: SANTA PARAVIA AND FIUMACCIO**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** It is dawn of the 15th Century; you rule a tiny Italian city-state. Your goal: The Crown!

Up to six players can compete as rulers and neighboring cities. You control the grain harvest, feed your serfs, set tax rates, dispense justice, and invest in public works.

The future of your realm will depend on your decisions. If they are wise, your city-state will grow and you will acquire loftier titles. If your rule is incompetent, your people will starve and you may be invaded by your neighbors.

How will you rule your kingdom? Will you be an enlightened leader - or an unscrupulous despot? Only you can answer that question - with Santa Paravia and Fiumaccio.

**PRICE: \$ 9.95 Tape**

**\$19.95 Disk**

**TITLE: SARGON II - CHESS**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** SARGON II (Spracklens)...an evaluation routine that enabled it to beat the giants!...unequalled in the end game..."It is able to push passed pawns toward queening, play a strong end game, and range in deep play levels at end game without user direction. Has 7 levels of play, and levels 0-3 play in tournament time. It has a randomized opening book for all 7 levels of play through 3 down, left and right. A special hint mode is included at all levels of play but 0 that will suggest a good but not necessarily the next best move you can make.

**PRICE: Disk, \$34.95**

**Tape, \$29.95**

**TITLE: SAUCER INVASION**

**PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**

**HARDWARE REQUIREMENTS: Paddles**

**DESCRIPTION:** We're being invaded by aliens from another planet. Your mission is to destroy as many saucers as possible with 15



missiles. Use the game paddle to move the launch tube back and forth across the bottom of the screen, then fire with the paddle button. A two stage missile boosts slowly, firing its warhead midway toward the target. The flying saucers fly at different speeds and altitudes so luck and timing are crucial! High resolution graphics, exploding saucers and wild sound effects make full use of the APPLE capabilities.

**PRICE:**

**TITLE: SHADOW HAWK ONE**

**PUBLISHERS NAME: HORIZON SIMULATIONS**

**HARDWARE REQUIREMENTS: joysticks**

**DESCRIPTION:** A strategy and dexterity game which modifies the capabilities of the players ship by spending raw material for improvements. The game is done in Machine and Forth languages. The 3-D, Triple-Axis Rotation, High Resolution Graphics are similar to the game BATTLEZONE by Atari.

**PRICE: \$49.95**

**TITLE: SKYBOMBERS II**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** Two countries, separated by The Big Green Mountain, are at war. Both nations are equipped with only one means of attack - SKYBOMBERS.

You and your opponent, each representing the nations at war, command opposing fleets of fighter-bombers armed with bombs and missiles. As enemy commanders, each of you has specific orders: Cross that mountain and bomb the enemy blockhouse into oblivion! Flying over that innocent-looking mountain is not easy for either air force. The aircraft can fire missiles at each other; if that fails, they can ram each other. Sometimes, aircraft encounter falling bombs and are blown to pieces in flight. Desperate pilots can even crash into the blockhouse.

**PRICE: \$ 9.95 Tape**

**\$19.95 Disk**

**TITLE: SOUTHERN COMMAND**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** Southern Command is a battalion-level simulation of the Israeli counterattack to cross the Suez Canal during the October War of 1973 against Egypt.

The Sinai battleground is displayed in Hi-Res Graphics on a 28x39 hex grid map which can be viewed on one screen or on twelve screens, using scrolling. More than ten unit types including tanks, halftracks, BDM's, infantry and Egyptian SAM sites (to combat Israeli airstrikes) are used in the two player and each of the four computer-as-opponent scenarios.

Modern warfare is accurately reflected in the ability of units to reorganize after they have been attacked and in the "Delayed Move" feature, allowing units to ambush moving enemy units. Each side also has the ability to sight hidden enemy units.

Southern Command is available with diskette, rule book, map and player aid card.

**PRICE: \$39.95**

**TITLE: SPACE**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** A unique epic game series which provides a multifaceted simulation of human life in an interstellar environment. Two different game packages represent some of the decisions which



might be faced by a member of an interstellar society. Play begins with the building of one or more "characters" who may enter the various scenario games on each of the diskettes. You are challenged not only to cope with the scenario itself, but also to learn the strengths and weaknesses of your characters. SPACE includes Characters and the original scenario games: First Blood, Defend, Explore, Trader and High Finance.  
**PRICE: \$29.95**

**TITLE: STAR WARRIOR**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** You are a Star-faring knight, bound tightly by a code of ethics, a mercenary with a cause. You must take on an entire planetary occupation force - alone. You are outnumbered by storm troopers of the Stellar Union, but you are far from helpless.

You have no walls, no doors, no rooms, no different levels to contend with. Play "Star Warrior" - you can walk, jump - even fly over swamps, forests and mountains. It's an easy game to learn but it's by no means unchallenging.

The emphasis is on fast action! Choose from 19 commands, up to 4 suits of powered armor,, 2 scenarios and 5 levels of skill. In Scenario One, you must divert your enemy from the main attack. Your aim is the destruction of military installations and vehicles. In Scenario Two, you must use sensors to track down and destroy the tyrannical military governor and his staff.

Like your mythical namesake, you are the Fury and the Agent of retribution - a soldier of daring, courage and extreme technological sophistication.

**PRICE: \$39.95**

**TITLE: STARFLEET ORION**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** War in The Cosmos. "Starfleet Orion" brings you the opportunity to fight space battles in your living room. The Deathsong scenario is one of twelve provided in the game. These are of varying complexity with 2 to 15 spacecraft.

12 Games in 1- infinitely expandable.

One program is the game. The other programs create data files - scenarios - that make "Starfleet Orion" infinitely expandable. You get 12 play-tested scenarios in the Battle Manual. You can invent more of your own. Your only limit is your imagination!

"Starfleet Orion" is designed for 2 players. Includes Rulebook and Ship Control Sheets as well as the Battle Manual.

Minimum Configuration Requirements:

APPLE Cassette: 16K or 32K with integer BASIC in ROM (2 program versions supplied)

APPLE Disk: 32K with integer BASIC in ROM

Rating: Advanced complexity...medium ease-of-play...1/2 to 6 hrs. playing time.

**PRICE: \$19.95 Cassette**

**\$24.95 Disk**

**TITLE: STOCKS AND BONDS**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** Here's your chance to be a Wall Street genius. Players choose a general strategy and invest in the stocks that fit their game-plan. Play it safe, gamble or do a little of both. In a "bear" market players investing heavily could lose their shirts, while a "bull" market would cause them to make great gains. The winner makes the most money through game

transactions.

**PRICE: \$20.00**

**TITLE: TANKTICS**

**PUBLISHERS NAME: AVALON HILL GAME COMPANY**

**DESCRIPTION:** Armored combat on the Eastern front of WWII. Includes full-color mounted mapboard and counters. You, as the German tank platoon leader, start the game outnumbered 2 to 1. However, you choose your tank types before each of 5 scenarios. You also specify what your opponent, the computer, is to have before going after of defending the specified objective from the Russians.

**PRICE: \$24.00 Cassette**

**\$29.00 Disk**

**TITLE: TAWALA'S LAST REDOUBT**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** TAWALA'S LAST REDOUBT puts you in the position of rebel leader. You must intercept and decipher Tawala's secret messages to his supporters, form alliances with local chiefs, detect Tawala's spies in your midst, separate hard intelligence from enemy disinformation, avoid Tawala's military forays against you and, finally, lead the assault against the Prince's stronghold.

**PRICE: \$29.95**

**TITLE: THE BATTLE OF SHILOH**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** This is the historically faithful recreation of the great Civil War conflict of April 6-7, 1862- the Battle of Shiloh.

Every brigade of both Union and Succession armies present during the actual battle (including the Union gunboats moored off Pittsburg Landing) is accurately rated for movement, combat strengths, morale and leadership. The battlefield map is presented in hex-grid form with terrain that consists of hills, forests, rivers, bridges, and creeks. Artillery is provided; a step reduction system is used to calculate combat results.

Innovations include the ability to fine-tune combat strengths for each side, which allows for balanced play between players of different abilities. You can also select four degrees of risk and four levels of an attack/defense's ferocity. All of which gives each side sixteen different possible strategies.

The computer can play either or both sides during solitaire.

**PRICE: \$39.95**

**TITLE: THE COSMIC BALANCE**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** THE COSMIC BALANCE reaches new frontiers in the universe of space games. Each player assumes the dual role of commander and architect of a starship fleet. For a ship of given size, the various parameters and trade-offs include: engine (for power), drives (for speed and maneuverability), weapons (such as phasers, disruptor bolts, plasma torpedoes, seeker missiles and unmanned fighter swarms), defense belts, shields, transporters and space marines.

There is a crew efficiency factor which affects the ability of a ship in battle. Ships with greater hull space have more room for recreation, allowing for greater crew morale and efficiency.

There is no best ship in this game; only one designed with

ser, reactor core and pump house. Valves, pumps, turbines, filters and control rods are individually activated by keyboard command.

**PRICE: \$39.95**

**TITLE: TIGERS IN THE SNOW**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** On December 16, 1944, Hitler launched a desperate surprise offensive against the thin Allied lines in the snow-covered Ardennes forest of Belgium and Luxemborg. He failed.

What a mad genius could not do, you may yet accomplish - in this historical simulation of the Battle of the Bulge.

As the German commander, you must take your infantry and armor (such as the dreaded "Tiger" tanks) and storm through the Allied forces to reach the other side of the Meuse River. You must carefully regulate the expenditure of your precious fuel and supply.

As the Allied leader, you have to hold out againsts the blitzing Germans until reinforcements arrive. Using different attack/defense strategies, you must keep the enemy from taking towns and reaching the Meuse. Your air cover can help - if the weather is clear.

The game uses a step-reduction combat system. In solitaire, the computer can play either or both sides.

**PRICE: \$39.95**

**TITLE: TORPEDO FIRE**

**PUBLISHERS NAME: STRATEGIC SIMULATIONS**

**DESCRIPTION:** Simulates battle between submarines and convoy escorts. You can challenge another player or engage in solitaire warfare where the computer plays the submarines. Create your fleet from 30 ships of the four major navies (all rated for speed, weaponry and maneuverability with historical accuracy)- or design your own. Make up your own scenarios-day or night actions, single or multiple ship battles. As escort commander, use sonar, radar and your eyes to protect the convoys from the enemy before. As the Submarine Commander, you make full use of the remarkable computer-generate periscope view to locate your prey.

**PRICE: \$59.95**

**TITLE: TUESDAY MORNING QUARTERBACK**

**PUBLISHERS NAME: AUTOMATED SIMULATIONS**

**DESCRIPTION:** Now you can coach your own pro football team when you play Tuesday Morning Quarterback.

Once you've finished watching the big game on TV, you can take an active part in a game that has all the excitement and frustration of the real thing. You're the coach and captain, and the outcome of the game depends on whether you can outguess your computer opponent and call the best plays. Choose from 16 different offensive plays: 7 running plays, 8 pass patters-plus an option play. And there are 6 defensive options-96 possible combinations. But you've only got a few seconds in the huddle to make your decision.

**PRICE: \$29.95**

**TITLE: UFO**

**PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**

**DESCRIPTION:** You are the captain of a space ship carrying the last remnants of the human race, after a space war with another

planet in which both worlds were destroyed. The aliens have launched a similiar vessel and will attempt to destroy your ship. On each move you decide whether to maneuver, halt for repairs, or fire from your arsenal of heavy guns, warheads and lasers

**PRICE:**

**TITLE: WAR**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** State-of-the-art brilliance comes to the APPLE computer with WAR - a detailed war game for one or two players. Your army consists of armored units, infantry units, engineer units (which can either build or destroy all important bridges), and aircraft. Set against a backdrop of forests, cities and rivers, you must move your units into battle and eventually destroy your opponent.

WAR comes complete with an extensive instruction manual that outlines all of the strategies and tactics that you'll need to execute a winning game. WAR is certain to provide the avid war gamer with many hours of colorful excitement and action-packed fun.

**PRICE: \$24.95**

**TITLE: WAR OF THE SAMURAI**

**PUBLISHERS NAME: KRELL SOFTWARE**

**DESCRIPTION:** An incredible game of combat and intrigue. Two to four players may compete in this original game that combines the strategic complexity of Go with the subtle dynamics of Chess.

**PRICE: \$39.95**



## GRAPHICS

The Apple has brought computer graphics into everyday life. Graphics are now commonplace in business, education, research, and entertainment applications of personal computers.

Computer Station is proud to have taken place in bringing low cost hardcopy graphics to Apple users. The sophistication of the high resolution graphics of the Apple II has set an example for the rest of the industry for state of the art computing. Having the capability to use graphics on a screen was magic enough for awhile but then the desire arose to be able to "dump" the screen to a piece of paper that could be studied, filed, passed on for review, etc. Printer companies saw the need and desire for hardcopy graphics in the hardware they were producing. Computer Station married the Apple to these printers with the appropriate software drivers-- the result being many users who enjoy the magic of today's technology at a fraction of yesterday's cost.

I am especially pleased and proud to be involved with the development of products that make personal computing more fun and practical. I watch with awe when the Apple Brains (Computer Station's development team) are at work.

Respectfully,

Lynn K. Busby, President  
Computer Stations, Inc.



# GRAPHICS

A RANDOM WALK . . . . .	GR-1
A2-3D1 GRAPHICS PACKAGE . . . . .	GR-1
A2-GE1 GRAPHICS EDITOR . . . . .	GR-1
AB-3D1 BASIC 3D GRAPHICS . . . . .	GR-1
ACCU-SHAPE . . . . .	GR-1
ADDITIONAL FONTS AND CHARACTER SETS . . . . .	GR-2
ALPHA PLOT . . . . .	GR-2
ALPHABYTES . . . . .	GR-3
ANADIX (MODEL9501) GRAPHICS SOFTWARE . . . . .	GR-3
APPLE DATA GRAPH 2.1 . . . . .	GR-4
APPLE FLASHER . . . . .	GR-4
APPLE PAINTBOX . . . . .	GR-4
APPLE WORLD . . . . .	GR-4
APPLEWRITER GRAPHICS . . . . .	GR-4
ARTIST'S DESIGNER . . . . .	GR-5
AUTO PLOT . . . . .	GR-5
BANNERS I . . . . .	GR-6
BLOCK SHAPES FOR APPLESOFT OR ASSEMBLY . . . . .	GR-6
BRIGHTERWRITER GRAPHICS SOFTWARE . . . . .	GR-6
CHARACTER GENERATOR . . . . .	GR-6
CHART MASTER . . . . .	GR-7
COMBINED ENHANCED GRAPHICS SOFTWARE . . . . .	GR-7
COMP-U-SKY . . . . .	GR-7
COMPU CUBE . . . . .	GR-8
COMPUTER PORTRAIT SUBSYSTEM . . . . .	GR-8
COPYCAT . . . . .	GR-8
CURVE COPY . . . . .	GR-9
CURVE II . . . . .	GR-9
CURVE- USA . . . . .	GR-9
DATA PLOT . . . . .	GR-10
DATA-GRAPH . . . . .	GR-10
E-Z DRAW . . . . .	GR-10
EDITRIX (TM) . . . . .	GR-11
ELECTRIC CRAYON . . . . .	GR-11
ENHANCED GRAPHICS SOFTWARE . . . . .	GR-11
EXECUTIVE BRIEFING SYSTEM . . . . .	GR-11
EXPANSION PAC-1 . . . . .	GR-12
EXPANSION PAC-II . . . . .	GR-13
FONT WRITER . . . . .	GR-13
GPS - GRAPHICS PROCESSING SYSTEM . . . . .	GR-13
GRAF-PAK . . . . .	GR-14
GRAPH FIT . . . . .	GR-14
GRAPHIC SOFTWARE FOR MICROCOMPUTERS . . . . .	GR-14
GRAPHIC WRITER . . . . .	GR-14
GRAPHICS LIBRARY . . . . .	GR-15
GRAPHICS PRINTING SYSTEM . . . . .	GR-15
GRAPHTRIX 1.3 . . . . .	GR-15
HI-PLOT INTERFACE TO APPLE PLOT . . . . .	GR-15
HI-RES GRAPHIC PRINTER . . . . .	GR-16
HI-RES GRAPHICS PAD . . . . .	GR-16
HI-RES SECRETS . . . . .	GR-16
HIGHER FONTS I . . . . .	GR-17
HIGHER GRAPHICS II . . . . .	GR-17
HIGHER TEXT II . . . . .	GR-17
HISTO-GRAPH . . . . .	GR-18
INTRODUCTION TO LO-RES GRAPHICS . . . . .	GR-19
KEYBOARD . . . . .	GR-19
LETTER POST . . . . .	GR-19
LOW RESOLUTION SHAPEWRITER . . . . .	GR-20
MESSAGE TRIO . . . . .	GR-20
MICRO PAINTER . . . . .	GR-20
MICRO-PAINTER . . . . .	GR-20

MIDPOINTS AND LINES . . . . .	GR-21
NEC SPINWRITER GRAPHICS . . . . .	GR-21
OMNI PLOTTING PACKAGE . . . . .	GR-21
PADDLE GRAPHICS . . . . .	GR-21
PADDLE SHAPEMAKER . . . . .	GR-21
PARALAX . . . . .	GR-22
PASCAL ANIMATION PACKAGE . . . . .	GR-22
PASCAL ANIMATION TOOLS . . . . .	GR-23
PASCAL GRAPHICS . . . . .	GR-23
PFS: GRAPH . . . . .	GR-24
PILOT ANIMATION PACKAGE . . . . .	GR-25
PLOT II . . . . .	GR-26
PRESENTATION AID . . . . .	GR-26
PRINT O GRAPHER . . . . .	GR-26
ROGER'S EASEL . . . . .	GR-27
SCIENTIFIC PLOTTER . . . . .	GR-27
SCREEN DIRECTOR . . . . .	GR-28
SHAPE BUILDER . . . . .	GR-28
SHAPE EDITOR . . . . .	GR-28
SMART . . . . .	GR-28
SPECIAL EFFECTS . . . . .	CR-29
STATION MASTER . . . . .	GR-30
STOCKPLOT . . . . .	GR-30
STROBE PLOT . . . . .	GR-30
SUPER DRAW AND WRITE . . . . .	GR-31
SUPER PIX SOFTWARE . . . . .	GR-31
SUPER SHAPE ANIMATE . . . . .	GR-31
SUPER SHAPE DRAW . . . . .	GR-31
SUPER WEAVER . . . . .	GR-32
TABLET SHAPEMAKER . . . . .	GR-32
TABLET-GRAPHICS . . . . .	GR-32
TEKSIM THE APPLE II/TEKTRONIX 4010 SIMULATOR . . . . .	GR-33
TEXT TYPE PROGRAM . . . . .	GR-33
THE ARTIST . . . . .	GR-33
THE COLORING BOARD . . . . .	GR-34
THE COMPLETE GRAPHICS SYSTEM II . . . . .	GR-34
THE CREATIVITY LIFE DYNAMIC PACKAGE . . . . .	GR-35
THE CREATIVITY TOOL BOX . . . . .	GR-35
THE DESIGNER . . . . .	GR-35
THE FORECASTER II . . . . .	GR-36
THE GRAPHICS MAGICIAN . . . . .	GR-36
THE GRAPHICS PRINTING SYSTEM . . . . .	GR-37
THE ILLUSTRATOR . . . . .	GR-37
THE PASCAL GRAPHICS EDITOR . . . . .	GR-38
THE SCREEN MACHINE . . . . .	GR-38
THE SHAPE PACKAGE . . . . .	GR-38
THE SLIDE SHOW . . . . .	GR-38
THE SPACE TABLET, A 3-D GRAPHICS TABLET . . . . .	GR-39
THE STEREO GENERATOR . . . . .	GR-39
THE SUPERPLOTTER . . . . .	GR-40
U-DRAW II . . . . .	GR-40
ULTRA HI-RES GRAPHICS . . . . .	GR-40
ULTRA-RES . . . . .	GR-41
UNIVERSAL GRAPHICS . . . . .	GR-41
VIDEO MARQUEE . . . . .	GR-41
VIDICHART . . . . .	GR-41
VISILIST . . . . .	GR-42
VISIPLLOT DRIVER . . . . .	GR-42
ZOOM . . . . .	GR-42
ZOOM GRAFIC . . . . .	GR-42

**PRICE: \$49.95**

**TITLE: ADDITIONAL FONTS AND CHARACTER SETS**

**PUBLISHERS NAME: PENGUIN SOFTWARE**

**HARDWARE REQUIREMENTS: paddles or joystick, or, optionally, a graphics tablet.**

**DESCRIPTION:** Add variety or new languages to the text in your displays with two disks full of new character sets to use with The Complete Graphics System character generator. Included on these disks are 50 fonts, large and small, ranging from Old English, to Computer, to Greek and Russian. With the character generator, you can print at any location on the hi-res graphics screen in any of the graphics system colors. 2 disks, requires The Complete Graphics System or The 100 Color Drawing System.

**PRICE: \$19.95 for the entire set.**

**TITLE: ALPHA PLOT**

**PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE**

**DESCRIPTION:** ALPHA PLOT is a fascinating Apple graphics tool. It not only lets you draw, title and label and endless variety of pictures, charts and hi-res displays, it lets you manipulate, copy, compare, and even combine them. Here is a sampling of what you can do with Alpha Plot and your Apple:

**TYPE A PICTURE:**

With Alpha Plot's easy-to-use keyboard plotting system, you can quickly lay pictures out on the screen, plotting in any hi-res color or reverse (the automatic opposite of the background color at any point). COLOR MIXES are optional too. Lines, circles, ellipses and boxes (outlined or filled with color) may be plotted with one or two keystrokes. All pictures may be saved to or loaded from disk at any time.

**HI-RES TEXT TOO:**

Alpha Plot lets you type upper and lower case directly onto the hi-res screen in four sizes, ranging from normal to giant; no additional hardware is required. Each word or character is positionable at any point on the screen with no dependence on htabs and vtabs. Type COLOR TITLES and even sideways if you want; an effective feature for graphs.

Alpha Plot's PROPORTIONALLY-SPACED TYPE will give a professional look to your hi-res presentations. Even the kerning and leading (space between letters and lines of type) is adjustable. People do notice the improvement.

**TRACEABLE, ERASABLE LINES:**

Alpha Plot's optional Rubber-Band Cursor projects a line between two points so you can make visual adjustments before you draw. "Reverse" lines may also be drawn and then, if you want, completely erased without disturbing background details. A HI-RES GRID may be temporarily superimposed on your drawing or removed at any time.

**2 PAGES/2 DRAWINGS:**

You can instantly switch between Apple's two "pages" of graphics and work on two hi-res drawings in memory at once. Pages can even be instantly switched in memory, putting Page 1 onto Page 2 and vice versa.

**IMAGE COMBINER:**

Any two drawings may be temporarily viewed together for comparison or permanently superimposed in 4 different ways (opaque, transparent, etc.).

**IMAGE CHANGERS:**

Any rectangular segment of a hi-res drawing can be moved to any location on either hi-res page. You can, for example, center finished images on the screen, or imprint your logo or name on



all of your hi-res pictures. Also, an instant NEGATIVE of any section of the screen (or the entire screen) is a useful feature. Hi-res images can even be CONVERTED TO LO-RES and back!

**MORE PICTURES PER DISK:**

Alpha Plot's Scrunch routine, you can save any hi-res image in as little as 1/3 the normal memory space (11 sectors instead of the normal 34), depending on the complexity of the image.

**HI-RES TIPS:**

With Alpha Plot, you will receive a 40-page documentation book, which includes Apple Tip Book #4 and a whole new collection of Apple Tips -- shape table hints, animation experiments, a collision graphics demo, and hi-res program listings, all designed to help you make the most of your Apple's amazing graphics capabilities.

**PRICE: \$39.50**

**TITLE: ALPHABYTES**

**PUBLISHERS NAME: LOTUS**

**DESCRIPTION:** The Latest in the Lotus Graphics Family of Software Products

Alphabytes font (type face) diskettes come in black and white, color and decorative styles. These add-on packages increase the text capability of the Executive Briefing System EBS, the popular presentation graphics package for business and professional users.

Each Alphabytes diskette contains 24 fonts, offering you a total of 72 styles to choose from. The black and white and color diskettes each have 3 families of text style-METRO, CLASSIC and ATLAS, each in 8 different sizes. The decorative fonts package features 12 distinctive versions in both black and white and color.

**Make Your Point**

Discover for yourself what many Fortune 500 companies have found out - EBS and Alphabytes, with an Apple computer, offer a practical professional and inexpensive way to sell your product, or tell your story.

With EBS you can create visually dynamic "slide shows" on an Apple computer, for meetings, conferences, seminars and demonstrations. Graphics generated by programs like VisiPlot can be enhanced with the wide variety of type faces offered on Alphabytes diskettes.

Alphabytes can also be used with PRISMATIC to add true color text to images printed out on the Integral Data Systems Prism color printer.

**Enhance Your Slide Show**

In all of the 24 decorative fonts, much of the standard Apple II punctuation has been replaced by assorted borders, patterns and figures, available to you at a single keystroke.

**Software Requirements -** The Alphabytes font diskettes are NOT program disks. They are intended to be used with any of the Lotus Graphics Family of software products.

**PRICE: \$24.94 per diskette**

**TITLE: ANADEX (MODEL9501) GRAPHICS SOFTWARE**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** This software package has all of the features of our Enhanced Paper Tiger Graphics Software (Stock #7541) yielding hard copy results for the Anadex (Model #9501) printer. This assembly language Hi-Res dump for the Apple Allows Anadex owners to discover and utilize the hidden talents of the graphics capabilities built into the 9501.

**PRICE: \$44.95**

**TITLE: APPLE DATA GRAPH 2.1**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** Plots up to 3 superimposed curves on the Hi-res Screen with both X & Y axes dimensioned. Each curve consists of up to 120 pieces of data. Graphs can be stored to disc and recalled immediately for updating. Up to 100 graphs can be stored on the same disc. Great for Stock market Charting, Business Management, and Classroom instruction!

**PRICE: \$40.00**

**TITLE: APPLE FLASHER**

**PUBLISHERS NAME: CROW RIDGE ASSOCIATES, INC.**

**DESCRIPTION:** APPLE GRAPHICS USERS- SEE YOUR PICTURES IN A FLASH! High Speed Search and Display of Hires Screens.

1.5-2 Second Display Time!

Uses Standard Files.

Slide Projector Simulation.

Continuous Display Modes.

**PRICE: \$34.50**

**TITLE: APPLE PAINTBOX**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A High Resolution Graphics program which combines the functions of Etch-A-Sketch, Spirograph, and a Function-Driven Drawing Board. Automatic Color Selection, Lines, Rectangles, Curves, and Auto-Color-Fill-In make it an unusual graphics drawing aid.

**PRICE: \$19.95**

**TITLE: APPLE WORLD**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** APPLE WORLD turns your apple into a sophisticated graphics system capable of creating animated three-dimensional color images, projecting them in true perspective on the screen, rotate them, move them closer, further away, and many other exciting and imaginative things.

Draws objects with 65,000 pints per side.

A powerful screen-oriented text editor included to facilitate image formation. This program was recently featured on Tom Snyder's Prime Time Saturday TV Show and is now available for sale.

APPLE WORLD's powerful editor is so easy to use that children will love it. You can now "sketch" your dream house, boat, car, or fantasy empire. Then view it as it would be seen from 10,000 feet, or you can ZOOM in until the screen is filled with a doorknob. You could then go inside and move from room to room examining furniture placement as your screen rotates within the room. Images or specific parts of images can easily be saved to disk or printer.

Does all this sound like science fiction? You won't think so after you have visited APPLE WORLD.

**PRICE:**

**TITLE: APPLEWRITER GRAPHICS**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**HARDWARE REQUIREMENTS:** Requires 3.3 DOS Tool Kit

**DESCRIPTION:** With Applewriter Graphics, Apple users are now able to obtain hard copy of the character sets available with DOS Tool

Kit. Our graphic driver is transparent when used in conjunction with Applewriter; all the familiar menus and options for editing and printing are still there, but now a variety of print "fonts" are available for the final draft.

**PRICE: \$34.95**

**TITLE: ARTIST'S DESIGNER**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Set aside your paints, brushes, and canvas - now you can create works of art with your Apple II or II Plus computer! Artist's Designer is an exciting program that makes the most of your Apple's superb color graphics capabilities. Designed by an art instructor for computer art enthusiasts, it lets you "draw" and "paint" virtually any color graphics composition you wish, using your color monitor or color television screen as a "canvas."

Unlike more conventional graphics systems, Artist's Designer produces irregular shapes, curves, and other forms. And you can use colored dots to fill defined areas or to introduce textures. The five vibrant colors at your command - green, yellow, orange, violet, and red - can also be mixed with black or white to produce hundreds of color tints, mixtures, and shades, you can save your masterpieces, too. Up to 35 finished or in-progress compositions fit on a single storage diskette. One of Artist's Designer's unique features redraws your designs, step - by step - so you can "re-run" your process of creation and examine the artistic choices you made. This feature can likewise be used to experiment with "art animation," and exciting new performance art.

Artist's Designer also: has a special LINK feature that lets you "link together" designs from different storage files...so you can build detailed compositions piece by piece; allows you to create "slideshows" of designs...so you can make tutorial presentations for use in the classroom, office, or anywhere else; provides complete editing capabilities, including selective erase/redraw features...so you save time by refining rather than redrawing compositions.

With the Artist's Designer package, you'll receive: 1) Artist's Designer master diskette, containing modifiable demonstration designs and a disk initialization program; 2) instruction manual.

**PRICE: \$65.00**

**TITLE: AUTO PLOT**

**PUBLISHERS NAME: MICRO PERIPHERALS, INC.**

**DESCRIPTION:** The AUTO PLOT Printer Control Card and interface cable make up the hardware portion of the Apple AP PAK. The AUTO PLOT card plugs directly into one of the Apple II peripheral slots and connects directly to the MPI graphics printer through the supplied parallel interface cable. In addition to all the functions performed by the standard Apple Parallel Printer Interface Card, the AUTO PLOT card can take any image from an Apple Hi-Res graphic display area and print it using only a single keystroke. And, if you supply the appropriate input parameters, it can print the Hi-Res display in any of three heights or twelve widths, indented, rotated 90 degrees, two separate displays side by side or even embedded in the middle of text. This is all made possible by the significantly increased firmware capability of the AUTO PLOT card. It can be software controlled to operate either as the Apple "P1" or "P9" PROM firmware.

**PRICE:**



**TITLE: BANNERS I****PUBLISHERS NAME: BERLINERSOFT**

**DESCRIPTION:** Prints large block letters on any Parallel or Serial printer. The letters print out lengthwise, allowing for any length message to be printed for store displays, announcements or signs. Prints three size letters, 11-1/2" by 11-1/2", 3" by 3-1/4", and 4-1/2" by 5". This machine language program is totally menu driven.

**PRICE:****TITLE: BLOCK SHAPES FOR APPLESOFT OR ASSEMBLY****PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Chock full of programs to create and animate all types of shapes, such as vector shapes, block shapes, HPLLOT shapes, text file shapes, data array shapes, etc.

Most animation routines are in machine language, and the source codes for these routines are included right in the package. All source code files are thoroughly explained and compatible with LISA and unprotected, and the machine language routines are also unprotected.

Included in Block Shapes for Applesoft or Assembly are shape examining, shape editing, shape drawing, music tone routines, violin sounds, noise creation, assembly language sounds, SUPERFONT and font using, and a Y table for either page of Hi Res that allows extra speed in machine language programs since you avoid the HPOSN subroutine.

Some of the information most critically absent in all packages to date includes two page flipping animation, shift (ROR and ROL) animation, two page HPLLOT or block shape animation. This package includes very complete explanations in all these areas as well as machine language routines for doing any of the above.

**PRICE: 3 Disks \$99.95****TITLE: BRIGHTERWRITER GRAPHICS SOFTWARE****PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** This is the Graphics software written for the JP225 (BrighterWriter) printer. The Hi-Res dump for this printer is supported with the standard Apple parallel (or serial) interface card. BrighterWriter is a registered trademark of Integral Data Systems.

**PRICE: \$34.95****TITLE: CHARACTER GENERATOR****PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** This utility program allows you to put text on the Apple's high-resolution screen. The character generator becomes part of your own BASIC program, and will be saved automatically on disk or tape with the program. Once the character generator provides both upper case and lower case with descenders, using an n x 9 matrix. Special features include proportional spacing, the ability to place letters in any desired position on the screen, and letters which appear white even on a color screen. The high-res screen will hold 17 lines of about 35 characters each, providing for clear readability. You can shift between upper and lower case, or use the shiftlock feature, by embedding control characters within the string to be printed. A sophisticated character design program is included, to permit you to design your own character design program is included, to permit you to design your own characters, using your own font or using color if



you like. The character generator and table occupies about 1.5K of memory.

PRICE: \$14.95 cassette  
\$19.95 disk

**TITLE: CHART MASTER**

**PUBLISHERS NAME: DECISION RESOURCES**

**DESCRIPTION:** Allows Apple owners to take advantage of Hewlett-Packard plotters to generate high quality full color business graphics, including:

- Bar Charts
- Pie Charts
- Scatter Diagrams
- Line Charts
- Overhead Transparencies
- Text Pages and Signs

This new interactive, menu driven program allows the user with little or no training to produce professional looking charts immediately; at the same time, sophisticated users can select from a variety of options to create complex charts. And Chart Master's ability to access data from VisiCalc files is just one of its many versatile features, as the enclosed summary of capabilities indicates.

Unlike most current graphics packages, which are geared to the technically trained user, Chart Master was created by business professionals who know what other business professionals want: high quality presentation charts that can be produced quickly, with a minimum of training, and at a reasonable cost.

-Will allow you to communicate financial, administrative and other data dramatically and persuasively.

-Quick and easy to learn. A secretary or clerical assistant can generate charts with little or no knowledge of the Apple or Hewlett-Packard plotter.

-You will enjoy the personal control over the design and production of business graphics that Chart Master provides.

-Easy editing features and the ability to access VisiCalc will make graphics production a routine part of producing budgets, data analysis, and all business reports.

-Instant high quality, hard copy business charts produced by a microcomputer are impressive to management and others.

PRICE: \$375.00

**TITLE: COMBINED ENHANCED GRAPHICS SOFTWARE**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Combined Enhanced Graphics Software allows you to put what you see on the hi-res screen of your Apple II on paper. Our combined version is completely menu driven and works with any of the printers and interface cards listed below. Computer Station's Enhanced Graphics Software is being used by Apple owners all over the world. Infoworld rates this software as excellent in both performance and ease of use. We happen to agree. Extensive documentation and practice pictures included.

PRICE: \$54.95

**TITLE: COMP-U-SKY**

**PUBLISHERS NAME: SCHAFER SOFTWARE**

**DESCRIPTION:** Comp-U-Sky is a high resolving graphics program which enables the Apple user to locate, identify and provide information on stellar objects. It presents graphic displays for eight directions, as well as overhead, for any location on Earth.

PRICE: \$39.95

**TITLE: COMPU CUBE****PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** Simulates the operation of the astonishing mathematical puzzle created by Hungarian architect Erno Rubik. Rubik originally developed the puzzle to teach his architect students spatial relationships in three dimensions. Rubik's cube has since become described as the most educational toy ever invented. Since only three faces of a cube are visible from any one perspective, COMPUCUBE provides two view of the cube. This allows the user to see all six faces of COMPUCUBE at the same time. Besides being fun for the user, COMPUCUBE is the perfect tool for the study of the solid cube puzzle.

**Compucube options:**

- Select a 2 x 2 x 2 or a 3 x 3 x 3 compucube
- Turn any face, or the entire cube in space
- Specify complex moves with single command lines
- Create a fresh cube at any time
- Scramble the cube with one command
- Store cubes in memory or on disk for later recall
- Pretest cube with desired patterns- even patterns not possible with a solid cube
- Ask the program how to solve any displayed cube.

**PRICE:****TITLE: COMPUTER PORTRAIT SUBSYSTEM****PUBLISHERS NAME: COMPUTER STATIONS, INC.****HARDWARE REQUIREMENTS: Game paddles**

**DESCRIPTION:** Computer Station has put it all together. The portrait subsystem allows Apple II owners to create computer portraits that may be heat transferred to create customized T-shirts, posters, and other novelty items. The portrait system is now available for fun or profit.

The Portrait Subsystem requires a 48K Apple II with Applesoft, one disk drive, game paddles, at least one monitor, and either an Epson MX-80 printer with graphics option, or Centronics 739 printer. The subsystem includes the means for creating the portrait on the screen by focusing a video camera on the subject. Two monitors are recommended to view the regular video on one and the digitized image on the other. The game paddles are used to control intensity and contrast so as to be able to create interesting effects as well as clear portraits. The composed digitized picture may be frozen on the screen at any time to view the finished result. The picture may also be saved to disk, if desired. The portrait software allows the digitized picture to be dumped to the printer by simply pressing the "P" key for print. Prior to printing, the entire image is reversed on the screen so as to print a "mirror image" suitable for heat transfer. The printed picture is approximately 9-1/2 by 8 inches. The entire portrait subsystem includes the Dithertizer II with video camera for input, the Station Master printer interface card with cable, portrait software, and starter supply set including special ribbons.

**PRICE: \$1175.00**

**TITLE: COPYCAT****PUBLISHERS NAME: CALIFORNIA SCHOOL FOR THE DEAF**

**DESCRIPTION:** A graphics utility program which allows easy viewing of images in the Graphics Library. Images can be saved to a second disk, if desired. If you have access to an Apple Silentype Printer, you can use this program to make hardcopy (on

paper) printouts of one image or an entire disk full.  
**PRICE:**

**TITLE: CURVE COPY**

**PUBLISHERS NAME: WEST COAST CONSULTANTS**

**DESCRIPTION:** A high speed machine language program which accurately scan maps pictures from the hi res screen to the Houston Instrument (HILOT) plotter in either of three selectable sizes. The two smaller sizes may be oriented vertically, if desired. You may optionally invert the field display to plot a negative of the hi res picture. Line patterns are color dependent giving a pseudo gray scale effect. Plotting is fast. The highly detailed image of Hopalong Cassidy required only eleven minutes to complete.

**PRICE: \$75.00**

**TITLE: CURVE II**

**PUBLISHERS NAME: WEST COAST CONSULTANTS**

**DESCRIPTION: FEATURES:**

- 1). Cartesian Equations,  $Y=f(X)$
- 2). Parametric Equations,  $X=h(T)$  and  $Y=g(T)$
- 3). Polar Equations,  $R=f(S)$
- 4). Data points or keyboard characters.
- 5). Shaded horizontal and vertical bar graphs.
- 6). A fully scalable alphanumeric character set in normal or bold font.
- 7). Linear and logarithmically scaled axes.

**CURVE II ALSO INCLUDES:**

- 8). Automatic centering of axes titles. (Top, side, & bottom)
- 9). Exclusive control of scale number formats. (Decimal and/or scientific notation)
- 10). Ability to plot linear and logarithmic error bars. (Independent control of upper and lower segments.)
- 11). A universal shading routine. (Featuring cross-hatch shading and ability to shade polygons with holes.)
- 12). A versatile pie chart generator with an exploded sector option. (User defines type of shading, including arc shading, density, color and labeling.)
- 13). Special bar graph routine. (Independent control of density and angle of shade lines for each bar.)
- 14). Support for the multi-pen plotter. (Along with continued manual color-pen control.)
- 15). Routine to calculate maximum and minimum array values.
- 16). Options for dotted grid lines, enhanced-length tic marks and enhanced curve traces.
- 17). Arc and circle generator routine.
- 18). Additional error diagnostics.
- 19). Improved data entry with full editing capabilities.
- 20). Option to produce graphics copies without re-entry of input.
- 21). A block character generator with a shading option.

**PRICE: \$275.00**

**TITLE: CURVE- USA**

**PUBLISHERS NAME: WEST COAST CONSULTANTS**

**DESCRIPTION:** Plots a hardcopy map of the United States of America with various options on any of the intelligent HILOT or Watanabe plotters. The program may be used as an educational tool to geographically relate demographic, social, political, seasonal,



and meteorological statistics and phenomology to states or regions. Full color maps can be plotted and enhanced with a wide variety of shading options. Offers features which allow the user to:

- Plot the boundary of the entire United States mainland and/or outlines of each individual state in any order.
  - Shade each state using slanted or cross hatched line elements at user specified angles and shade densities.
  - Manually change plotter pens at prescribed times or automatically select pen colors under program control provided the multi pen changer option is attached.
  - Label each state with its two letter mail code using bold characters or with a centered user specified title.
  - Adjust the physical size of state boundaries to arbitrary scales.
  - Construct a legend box having the same shading and color characteristics as a given state (or region). This feature facilitates rapid identification of associated data. Adequate spacing is reserved for titles at each legend box position.
- PRICE: \$75.00**

**TITLE: DATA PLOT**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Easy editing features allow you to create and modify a wide variety of full color graphic representations of numerical information. Bar charts, including additive bars, as well as single and multiple line charts may be plotted individually or cumulatively. Pie charts are easily sliced. All figures may be output to a graphics printer or saved as hi-res "pictures" for dramatic full color recall as visual aids during presentations. Basic statistics are displayed automatically.

**PRICE: \$59.95**

**TITLE: DATA-GRAPH**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** This valuable program is a computer assisted graphing system. It is designed for anyone with a need to maintain numeric data. With DATA-GRAPH, columns of figures are transformed into colorful graphs that are more interesting and more easily interpreted than raw numeric data. In a matter of minutes data can be entered and accurately displayed as colorful, high-resolution graphics. These displays can be formatted as Single-, Dual-, or Four-Quadrant graphs and be displayed on a video monitor (or TV) or printed on paper using the Apple Silentype printer. Advanced auto scaling systems automatically set the axis limits to the optimum value for your data.

**PRICE: \$49.95**

**TITLE: E-Z DRAW**

**PUBLISHERS NAME: SIRIUS SOFTWARE, INC.**

**DESCRIPTION:** E-Z DRAW has not just been updated to 3.3 DOS; we've done a complete rewrite. E-Z DRAW now includes the powerful HIGHER TEXT character generator written by Ron and Darrel Aldrich. With our new routines the fonts or any part of the picture can be flipped upside down, slanted right or left, rotated 90 or 180 degrees, mirrored, or any combination. Also the fonts or parts of the screen can be expanded in width or height, or compressed in height or width. You can mix portions of pictures together, or save only a portion of the screen on disk. Now fully keyboard controlled for better accuracy. Professional documentation and 20 different and imaginative type



inventor of the "moving cursor" menu.

Friendly Power

Each EBS package includes a demo diskette and an extensively illustrated User's Guide, which enable you to master EBS with ease.

Type in Excitement

Looking for a way to create text slides with impact? It's simple with EBS. With just three keystrokes, you're ready to create text-only screens which will capture your audience's full attention. Eight custom-designed fonts (character sets) are supplied on the program diskette. Text can be positioned precisely on the screen; this makes EBS useful for refining Visiplot charts and graphs.

Show it Easily

With EBS you can make computer slide shows which run automatically or manually, using hand controllers or the keyboard to advance, backup, or select an individual slide for viewing. EBS's special slide compression technique enables you to store up to 32 slides per diskette.

Say it Graphically

At last, draw directly on the screen in any of the six Apple Hi-res colors, with no extra hardware. Create borders, organizational charts, diagrams, and line drawings of any type, using only EBS, the Apple II keyboard, and your imagination.

Print it Out

Want to share your beautiful EBS shows with associates who don't own Apples? Does the Chairman of the Board want "something in writing?" The Executive Briefing System program provides printer drivers for Epson, Integral Data, and Silentype printers. The impact of your color shows can also be captured in hard copy, as EBS supports the new color IDS Prism Printer.

EBS Adds Excitement

presentations will never be boring again when they feature EBS's special effects like rising or falling curtains, spirals, cuts, dissolves.

And More

**PRICE: \$199.00**

#### **TITLE: EXPANSION PAC-1**

**PUBLISHERS NAME: VERSA COMPUTING, INC.**

**DESCRIPTION:** A supplemental software package designed for use with the VersaWriter graphics tablet (Apple version). The package consists of three high resolution color programs:

Microscope Graphics Editor

-Four power magnification

-Creates a true Hi Res blowup of picture (other microscopic programs use Lo Res blowups)

-See the original Hi Res section and the enlargement simultaneously

-See the Hi Res color anomalies as you edit

-Use this program to define shapes with great detail

-Save the updated Hi Res picture and/or the enlarged portion

Drawing Templates

-Eleven predefined shape tables including: architecture, chemistry, game shapes, plumbing, landscaping, electronics, etc.-over 350 predefined shapes

-Space to include your own shape table

Color Shape Table Program

-Create shape tables with true Hi Res color shapes

-Defined shapes as you draw them, making more efficient use of memory space.

**PRICE: \$39.95**

**TITLE: EXPANSION PAC-II**

**PUBLISHERS NAME: VERSA COMPUTING, INC.**

**DESCRIPTION:** add 10 powerful graphics commands to VersaWriter drawing system.

- Shrink picture to 1/4 size in color.
- Magnify picture segment to full screen.
- Fast picture loader loads in 1/3 time.
- Buffer storage saves up to 60 images on one disk.
- Combine two screens into one picture.
- Remove colors from picture.
- Mirror and upside down functions.
- Mix functions to create unusual color effects.
- Graphics package may be incorporated into user programs.
- Compatible with other VersaWriter disks.

**PRICE: \$39.95**

**TITLE: FONT WRITER**

**PUBLISHERS NAME: MICRO PERIPHERALS, INC.**

**DESCRIPTION:** FONT WRITER is a software package developed to allow Apple II users an unlimited choice of type fonts when using the popular Apple Writer Text Processing System. It operates in conjunction with Apple Writer and requires no modifications to Apple Writer. Using FONT WRITER, multiple print fonts can be intermixed in a text file (or even on a line), spacing between lines can be altered, the dot density of the font can be changed, characters up to 32 point (1/2 inch) high can be printed, and Apple Hi-Res graphic displays can be included along with the text. The command structure of FONT WRITER is designed to present a user interface following the familiar Apple Writer conventions. In addition to the new text, Bold and Italic fonts included as a standard part of FONT WRITER, other font files can be user created or taken from Apple's DOS 3.3 Tool Kit or Synergistic Software's Higher Text and Higher Font. Any of these fonts can be printed in a variety of heights or densities, depending upon the application.

**PRICE:**

**TITLE: GPS - GRAPHICS PROCESSING SYSTEM**

**PROFESSIONAL AND STANDARD VERSIONS**

**PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**HARDWARE REQUIREMENTS: Paddles or joysticks**

**DESCRIPTION:** The GPS - GRAPHICS PROCFSsing SYSTEM allows for the easy creation, editing and manipulation of images in the manner that a word processor enables the easy creation, editing and manipulation of text.

**STANDARD VERSION**

The amateur artist or designer will enjoy the ease with which this program can be put through its paces using any Apple compatible paddles or joystick. The user need not have previous computer experience to follow the simple step by step procedures in the programs's manual.

**PROFESSIONAL VERSION**

The architect, scientist, draftsperson, pattern designer, art director, interior designer - anyone who creates and manipulates graphic images - will find this program a stunning time and work saver. The ease and speed with which the GPS program accommodates minor modifications or major changes in design, minimizes drudgery and frustration while maximizing the pleasure of creative experimentation. The versatility and application of this program as a professional graphics tool is virtually unlimited. (Consider, for example, a client presentation made directly on a

color monitor where images move, rotate, change size and color right before the viewer's eyes. Or, with a printer, this program quickly produces hard copies - even overlays - incorporating design changes requested by clients or associates.)

**PRICE: \$99.95 Professional Version**

**\$59.95 Standard Version**

**TITLE: GRAF-PAK**

**PUBLISHERS NAME: SMART WARE**

**DESCRIPTION:**

Apple HiRes Graphics Utility

Reproduce either HiRes Page 1 or Page 2, horizontally or vertically on the paper, with Positive or Negative image. Or reproduce both pages as a two page panorama with both pages butted in perfect registration - Page 1 above or beside Page 2!

Print a full screen or any part, simply by specifying diagonal corners. GRAF-PAK allows any feasible magnification: if it will fit on the paper, GRAF-PAK will reproduce it.

Compose your picture on-screen. Insert frames of any color, size or proportion. Erase or fill windows. Place vertical or horizontal crop marks with complete freedom. GRAF-PAK displays

all available scale factors, which depend only on your printer dot density, paper width and your choice of cropping boundaries.

Add text annotation (upper and lower case with no additional hardware, punctuation, numerals and expanded symbology) in all four directions, anywhere on the screen.

Eleven pages of instructions, examples and pictures!

More than 16 I/O cards supported!

Exceptionally user friendly.

**PRICE: \$34.95**

**TITLE: GRAPH FIT**

**PUBLISHERS NAME: MICRO WARE**

**DESCRIPTION:** A Hi Res graphing program that produces pie, bar, and line graphs. Just input your data and Graph Fit does the rest. Automatic scaling too.

**PRICE: \$25.00**

**TITLE: GRAPHIC SOFTWARE FOR MICROCOMPUTERS**

**PUBLISHERS NAME: KERN PUBLICATIONS**

**DESCRIPTION:** This self teaching guide will show you how to write your own graphics software. Contains 61 programs for 2 and 3 dimensional graphics: interactive input, rotations, translations, isometric and perspective transformations, scaling, stretching, clipping, intersections, shading, tablet software, hidden line removal, dynamic simulation, applications to engineering, science and business. Practice problems for classroom use. Convert elementary to advanced concepts. Program listings and theory presented side by side. Perfect for professionals, students and software developers. Adopted as a text by Stanford, University of North Carolina and others.

**PRICE: Book with program listings \$19.95**

**Disk of programs \$18.95**

**TITLE: GRAPHIC WRITER**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**HARDWARE REQUIREMENTS: Applesoft Tool Kit**

**DESCRIPTION:** Allows for printing text files created with Applesoft in various "type fonts". The type fonts are the character sets found in Apple's Applesoft Tool Kit e.g. Gothic,

**GR-14**



Roman, Blippo Black, Mirror, Outline, etc. It is transparent to the user when used with Appewriter and all the familiar editing and print formatting features of Appewriter are still available. This software may also be used as a stand alone product for use with print statements within the user's own programs.

**PRICE: \$34.95**

**TITLE: GRAPHICS LIBRARY**

**PUBLISHERS NAME: CALIFORNIA SCHOOL FOR THE DEAF**

**DESCRIPTION:** A group of images designed for use in teacher written blocks lessons, which are stored in twenty classifications (all fully compatible with the Dewey Decimal System). These disks will not work alone. There are currently about 700 images in the Graphics Library. Some categories require more than one disk. New images can be drawn using Edu Paint, Shaper or your Apple Graphics Tablet Software. Images can be viewed easily with the Copycat program. A 150+ page hard copy directory of images may be ordered separately.

**PRICE:**

**TITLE: GRAPHICS PRINTING SYSTEM**

**PUBLISHERS NAME: PROGRESSIVE SOFTWARE**

**DESCRIPTION:**

- \* For Diablo 1620, 1640, etc.
- \* High quality graphics printing of the Hi-Res screen (average printing time for full screen graphics- approx. 2.4 minutes)
- \* MAGIC FRAME allows on screen selection. Plus printing on all or part of screen.
- \* CPS program provides a variety of sizes and formats.
- \* Up to two ASCII characters can be selected as the print character.
- \* On screen display of the selected graphics scan area during printing.

**PRICE: \$104.95**

**TITLE: GRAPHTRIX 1.3**

**PUBLISHERS NAME: DATA TRANSFORMS**

**DESCRIPTION:** GRAPHTRIX 1.3 Matrix Graphics System is the latest version of Data Transforms' multi-printer graphics screen dump for the Apple II. GRAPHTRIX 1.3 will make hard copy of any Apple II Hi-Res Graphics Screen, and will place the graphic anywhere in the text the user wishes. GRAPHTRIX Matrix Graphics System transforms the Appewriter into the most powerful text editing system available.

**FEATURES:**

- \* Complete READABLE 35 page manual.
- \* Fully Menu Driven.
- \* Self-running Introduction and Demonstration.
- \* Prints ANY HI-RES Graphic your Apple II can create.
- \* Formats Text files from Appewriter or EDITRIX.
- \* Use as a Menu Driven Screen Dump or from in YOUR OWN Applesoft program.
- \* Graphic Magnification, Normal/Inverse, Page Centering.
- \* High and Low Crop Marks, Title String.
- \* Automatic Formatting of Graphics in your document.
- \* Superscript, Footnotes, Chapters, controlled your text file.

**PRICE: \$65.00**

**TITLE: HI-PLOT INTERFACE TO APPLE PLOT**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**GR-15**



**DESCRIPTION:** This software package allows for lettering and plotting data on the Houston Instrument HILOT (DMP-2) plotter of data files created with Apple Plot. Our software driver runs at the rated speed of the plotter and will accommodate up to 6 sets of data for bar charts which is not normally available to Apple Plot using graphic prints for hard copy. HILOT is a registered trademark of Houston Instruments, Inc.

**PRICE: \$44.95**

**TITLE: HI-RES GRAPHIC PRINTER**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION:** If you've been perplexed and frustrated by the inability to label your Hires Graphs or print text characters on the Hires screen then take a look at the Hires Graphic Printer. Perhaps one of the greatest features about this easy to use program is that it's written in Applesoft II. The program allows you to print in Hires all the standard alphanumeric keyboard characters in addition to 16 user defined characters. Any character, whether it be standard keyboard or user defined, can be changed quickly and easily to any symbol, object, or character of your choice. By resaving your program, your newest creations will become permanent until the next time you want them changed. Moreover, this program will append to yours with just two easy call statements. The Hires Graphic Printer has been fully tested and comes with complete documentation and examples.

**PRICE: \$26.95**

**TITLE: HI-RES GRAPHICS PAD**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** This well designed chart has Hi-Res commands, colors, and screen calls in a summary reference as well as a Hi-Res matrix work sheet. Pad of 50 sheets.

**PRICE: \$3.00**

**TITLE: HI-RES SECRETS**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Now includes: a color palette program that allows you to choose from hundreds of colors to fill shapes or pictures created with this package, and paintbrush routines.

Now you can design programs that will easily and automatically create dozens of multi-colored scenes and/or shapes...all necessary instruction and machine language routines included.

The HI-RES SECRETS package is chock full of programs to create and animate all types of shapes, such as vector shapes, block-shapes, HILOT-shapes, text file shapes, data array shapes, etc.

Included in HI-RES SECRETS are shape examining, shape editing, shape drawing, music tone routines, violin sounds, noise creation, assembly language sounds. SUPERFONT and font using, and a Y TABLE for either page of Hi-Res that allows extra speed in machine language programs since you avoid the HPOSN subroutine.

Some of the information most critically absent in all packages to date includes 2-page flipping animation, shift (FOR and ROL) animation, 2-page HILOT or block shape animation. This package includes very complete explanations in all these areas as well as machine language routines for doing any of the above.

How to use opcodes in machine language graphics and why the various opcodes were used in the routines in this graphics system are all explained.

**PRICE: \$125.00**

**TITLE: HIGHER FONTS I****PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** A collection of 25 Hi-Res graphic character sets for use with Higher Text and Higher Text II. Includes foreign languages, special graphic symbols, and a variety of alphabetic styles.

**PRICE: \$15.00**

**TITLE: HIGHER GRAPHICS II****PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** THE SCREEN CREATOR - Draw beautifully detailed high resolution screens for use in demonstrations, introductory logos, gameboards, graphs, maps, etc. Place: shapes, text, lines, points, and areas of color anywhere on the high resolution screen at any angle, size, or color in seconds with just a few keystrokes or using the game paddles. Text can be simply typed onto the screen at any angle. You can easily erase mistakes, move screen contents in any direction, load new screens or shape tables, and save your results to disk. No other graphics utility provides all these features.

THE SHAPE MAKER - With simple to use commands, create new shape tables or add new shapes to your current library. Design new shapes in any scale, rotation, or color for uses as varied as: Games - Chess, tank, spacewar, adventure games, etc.

Education - Math symbols, scientific notation, maps, etc.

Design - Electrical components, architectural symbols, etc.

Shapes can be edited as they are being produced. Display any shape at any time, and delete those no longer required.

THE SHAPE SHUFFLER - Drawing from your existing library of shapes and shape tables, create new tables with only the desired shapes in the order required for each specific application. Insert, delete, or transfer shapes from any shape table(s), including those provided, to any other.

SHAPE TABLES - Add the included shapes to your own programs, or simply use them as models for your own creations. Included are: Full alphanumeric character set, chess and card symbols, tanks, planes, men, spaceships, cars, monsters, buildings, trees, mountains, and many more.

TEXT - 24 page document packed with instructions, hints, and details about using the Apple II's high resolution graphics mode for animation or other applications.

**PRICE: \$35.00**

**TITLE: HIGHER TEXT II****PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Higher Text II by Darrell & Ron Aldrich provides the display capabilities you need when the Apple II's text output just isn't sufficient. With Higher Text II you can print characters in upper case, lower case, upside down, sideways, and in any color. If standard characters still aren't quite adequate, try printing in script, Old English, foreign languages, or special scientific symbology. Define your own specialized or decorative character sets, and easily create professionally customized displays without any hardware modifications. Features include:

EASY TO USE- Add Higher Text II to your own programs or use it alone. Included utility allows easy labeling of any high-res screen with any font/color/size. It allows for the creation of a simple scrolling message (as in movie credits) with no programming required. The 40 page manual makes all of Higher Text II's many capabilities to understand and use.

**FULL STANDARD ASCII CHARACTER SET-** The program displays the full upper and lower case 96 character ASCII character set with no lower case hardware required.

**ADDITIONAL CHARACTER SETS-** The program comes complete with a variety of additional predefined character sets (fonts). Print text in any of the following fonts:

Roman	Three~	Old English	Apple
Greek	Russian	Countdown	Narrow
Hebrew	APL	Gothic	Others

**COLORFUL TEXT-** Print large characters in the six standard high resolution colors plus yellow, pink, aqua, or blue violet.

**USER REFINABLE CHARACTER SETS-** With the easy to use Character Set Editors, define any special purpose characters that you may require. Scientific symbols, foreign languages, sideways or upside down letters, animation figures, etc. can easily be created and used within standard print statements.

**MIXED TEXT AND GRAPHICS ON ONE SCREEN-** Label graphs, maps, or pictures quickly and easily. Text can be mixed with any graphic displays without disturbing the display. You can even erase the text leaving the picture intact.

**FLEXIBLE DISPLAY MODES-** Print text in normal size and shape, tall letters, wide letters, large letters, or bold face. Print inverse characters and colors. Text can be "anded", "ored", or "exclusive-ored" with the background. Background can be specified to be any color or even a picture.

**MANY MORE FONTS AVAILABLE-** A supplementary diskette, Higher Fonts I, with 25 or more character sets is now available. Higher Fonts I works with either Higher Text or Higher Text II and costs only \$15.00. The disk includes several more language fonts, character sets designed for game use, a sideways font, architectural symbols, and a number of fancy English text styles.

#### APPLICATIONS INCLUDE:

##### EDUCATIONAL

-Display foreign language alphabets on the Apple's screen. Hebrew, Russian, and Greek character sets are included.

-Create mathematic and scientific symbols that aren't part of the Apple's keyboard.

##### BUSINESS

-Label high resolution graphs and charts.

-Create promotional displays and demonstration in large, easy to read characters in multiple colors. Great for group presentations, attention getting counter displays, conventions, etc.

##### GAMES

-Design game boards, maps, figures, monsters, etc.

-Perform animation with simple program commands.

##### STRIKING DISPLAYS

-The decorative text on the introductory screens of all Synergistic Software's games (Odyssey: The Complete Adventure, Wilderness Campaign, etc.) were all done with Higher Text.

-Make your own stunning introductory logos, attention getting message screens, or demonstration programs quickly and easily.

##### COMPUTER APPLICATIONS

-Work with computer languages requiring symbols not on the Apple II keyboard. APL font, for example, is included.

-Higher Text II can easily become part of your programs, too.

**PRICE: \$40.00**

#### TITLE: HISTO-GRAPH

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** A calendar based histogram or bar graph production system. It will accurately track four different fields of data. The data that you use can be any kind of numbers that relate to a



date; sales or cost figures, biological data, laboratory readings, or whatever.

**PRICE: \$29.95**

**TITLE: INTRODUCTION TO LO-RES GRAPHICS**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Think low-resolution is dull? Read Introduction to Low Resolution Graphics from Scelbi Publications and run the diskette. Discover techniques that are just starting to be applied to high-resolution graphics. Book and diskette. Uses both Integer and Applesoft.

**PRICE: \$29.95**

**TITLE: KEYBOARD**

**PUBLISHERS NAME: SOFTART SOFTWARE**

**DESCRIPTION:** KEYBOARD is an interactive, animated, HI RES graphics program designed to assist the unskilled typist in memorizing the location of the keys and learning the correct finger motion for each keystroke. Utilizing the graphics capabilities of the Apple Computer, this program draws an image of the Apple keyboard on the screen. As each key is pressed, the appropriate letter is animated while the words appear below in a "ticker-tape" display. This immediate reinforcement helps the user retain eye contact with the screen while learning the key locations. An optional typewriter sound effect is provided. The program is recommended for all ages. Suggested drill activities for both adults and children are included in the manual, and a reproducible worksheet is provided for classroom use.

The executive learning to use his new Apple will find this program will quickly help him to break the habit of looking at the keyboard (the infamous "Hunt & Peck" method). The beginning typist can employ the graphics display to build confidence and increase speed as he maintains eye contact with the screen. The experienced typist may choose to practice with the "Phantom Key" option, an unlabeled keyboard. With the "phantom key" option, each key appears on the screen only when it is typed. This mode is particularly effective in highlighting the users' most frequently mistyped keys. A press of the "RETURN" key clears the screen at any time.

For the child, KEYBOARD is the most effective method of teaching the key locations. The program will accept any input except reset and can be used by a young child who is totally unfamiliar with the keyboard. There are no prerequisite skills.

**PRICE: \$19.95**

**TITLE: LETTER POST**

**PUBLISHERS NAME: MICRO PERIPHERALS, INC.**

**DESCRIPTION:** LETTER POST is a great stride in the "Appleziation" of the office. The computer generation of personalized letters is a function that greatly extends the productivity of the typical office computer system. LETTER POST is a program designed to combine the capabilities of MPI graphic printers with single sheet feed capability, the AUTO PLOT card, FONT WRITER and mailing list. Using LETTER POST, not only can the address labels be printed, but the individualized letters as well. Pre-written paragraphs can be chained to make up letters from one inch to 22 inches in length, with provisions for manual text insertion and incorporation of the last name into the letter. All the font capabilities of FONT WRITER are retained, even the ability to embed graphic displays in to the text body. LETTER POST will



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handle names from either Apple Post or the Mailing List Database mailing list programs.

**PRICE:**

**TITLE: LOW RESOLUTION SHAPEWRITER**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A combined Assembly Language and Integer BASIC Program for creating and running Hi Speed Low Resolution Shapes in your Programs. You create shapes with Up, Down, Right, Left, and Plot/No Plot Commands (U, D, R, L, P) from the Keyboard. Instructions are given for saving the Shapes and then Combining them in your own Programs.

**PRICE: \$19.95**

**TITLE: MESSAGE TRIO**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** Consists of three different message making programs. You place a disk in the drive, enter what you want to say at the keyboard, and colorful, dynamic messages appear on the screens of TV sets connected to the Apple. Customers see the advertising messages and make purchases.

**Programs on Disk:**

**Hi Res Alphanumeric Message -**

Consists of 28 crisp, readable, characters/line, x 4 lines/page x 3 pages of text message. Characters are 1/8 screen height, and puff onto the screen, one by one, at comfortable reading speed. Good general purpose message maker.

**Scrolling Wonder-**

Brief messages, in Apple upper case characters, appear by floating up onto the screen from below. Messages enter in random sequence, with random 50% of messages flashing, random vertical spacing between messages, and random placement from right to left. A multiple rainbow grand finale ends the presentation and it begins again. Very good program to run on counter top at point of purchase.

**Giant Letter -**

Brilliantly colored letters, of full screen height, appear one at a time, in sequence, to spell out messages. Successive words have different colors. A running summary of the message, in Apple characters appears at the bottom of the screen, as the giant letters are presented. Very good program for shop windows. All programs have storage and recall facilities of messages from disk.

**PRICE: \$30.00**

**TITLE: MICRO PAINTER**

**PUBLISHERS NAME: FIREFLY COMPUTING**

**DESCRIPTION:** Paint your Apple. It's easy Micro Painter, the exciting new program that turns your Apple II into a sophisticated electronic coloring book. You will find your computer screen filled with specially designed patterns which you can fill with twenty one vibrant colors in virtually unlimited combinations. Micro Painter challenges your imagination as you explore this newest dimension in computerized art.

**PRICE: \$34.95**

**TITLE: MICRO-PAINTER**

**PUBLISHERS NAME: DATASOFT, INC.**

**DESCRIPTION:** Paint your APPLE! It's easy with MICRO-PAINTER, the exciting new program that turns your APPLE II into a

sophisticated electronic coloring book. You will find your computer screen filled with specially designed patterns, which you can fill with twenty-one vibrant colors in virtually unlimited combinations. MICRO-PAINTER challenges your imagination as you explore this newest dimension in computerized art.

**PRICE: \$34.95**

**TITLE: MIDPOINTS AND LINES**

**PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**

**DESCRIPTION:** These two colorful graphics demonstrations will run continuously. Great for store displays, parties, and showing off your computer.

**PRICE:**

**TITLE: NEC SPINWRITER GRAPHICS**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Software driver routine which allows user to dump the contents of the high resolution pages (options for Page 1 or Page 2) out of the NEC Spinwriter printer. Software may be used with NEC Models 5510 or 5520. This assembly language driver will work with any thimble and greatly enhances the versatility of this fine, letter-quality printer. The print out features true proportional results not usually found with letter-quality printer graphics.

**PRICE: \$44.95**

**TITLE: OMNI PLOTTING PACKAGE**

**PUBLISHERS NAME: POWERSOFT, INC.**

**DESCRIPTION:** Package contains 12 Applesoft programs & several reusable data sets including maps and circles. Full color range. Can be used for graphic art, map making, architecture, animation, T.V. ads, clothing design, plotting functions and drafting. Some major programs are: GIN MODE - allowing the user to dial dots, lines, and curves with the game paddles and save the drawings to disk; OMNI PLOT reads, seeks, and plots any data file containing Cartesian coordinates, and saves images to disk while preserving the original coordinates; WINDOW PLOT is the same as OMNI PLOT, but user chooses the portion of the Hi-Res screen the image will appear in; IMAGE PLOT replots images from disk and allows unlimited overlays of images on top of images while the files remain intact. Comes with an 18-page manual. APPLESOFT ROM.

**PRICE: \$29.00**

**TITLE: PADDLE GRAPHICS**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** The most powerful HI-RFS graphic development system available. Uses exclusive single paddle sketch mode. Upper/lower case text may be drawn in any size, directions or color. Pictures may be colored in seconds in any of 21 HI-RFS colors (must be seen to be believed). Shape-tables can be built from anything on a HI-RFS screen.

**PRICE: \$39.95**

**TITLE: PADDLE SHAPEMAKER**

**PUBLISHERS NAME: ROCKY MOUNTAIN SOFTWARE**

**DESCRIPTION:** A similar shape table maker as Tablet Shapemaker but uses the game paddles or a joystick to define each definition. A fine utility for programmers that believe a picture is worth a



thousand words.  
**PRICE: \$45.00**

**TITLE: PARALAX**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Paralax is a collection of graphics utilities which lets the user develop and manipulate high-resolution shapes for Applesoft BASIC programs. The Apple II program allows the user to generate a shape, automatically copy it, change its scale, merge it with other shapes, rotate and animate it.

**PRICE: \$85.00**

**TITLE: PASCAL ANIMATION PACKAGE**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Has the trick of animation been eluding you? Or are you just tired of programming high-resolution shapes in cumbersome assembly language? With the Pascal Animation Package you can produce exciting, animated graphics as quickly and as easily as text.

Add life to your graphics! The Pascal Animation Package lets you develop distinctive fonts of graphic shapes or pictures - a horse font, for instance, with stop-action pictures of a horse in various stages of running - then string these "snapshots" together in sequence that mimic movement. This approach also allows you to build a library of useful shapes that can be accessed quickly and used over and over again in your animations. The Pascal Animation Package: lets you use Pascal to write and manipulate programs with complex, animated graphics...so you save time developing software; allows you to print out high-resolution shapes at text speed...so you're able to create animations that behave more smoothly and realistically; provides a ready-made, efficient way to create libraries of shapes, many of which can be animated with the same movement codes...so you reduce software development costs, and manage animation projects more efficiently.

The Pascal Animation Package uses a specially developed, binary input/output system (BIOS) that knits the Apple's high-resolution screen to its text facilities. This innovation allows you to create a set of images - the shapes of a bird in flight, for example - and treat it exactly like a character font.

In other words, if you let "A" correspond to the bird's "wings up" and "B" to its "wings down" shapes, a Pascal program that printed A, then B, then A, then B (and so on) would result in a bird flapping its wings - slowly or quickly, as wished. Intermediate images could also be added, to make the motion as smooth as desired.

The Pascal Animation Package contains a number of programs, all extremely helpful for programming animated graphics. The Animation program - provided in source code - lets you do character cell animation under control of the Apple's HIRES 1 programmable character generator. Seven demonstration programs - provided in source code - are also included in the Pascal Animation Package to illustrate the simplicity and flexibility of Animation.

Another program, "Charedit," is a fast, powerful, high-resolution character editor which you can control either with your Apple's keyboard or game paddles. Teamed up with Animation, "Charedit" lets you use a variety of dramatic animation techniques.

Also included in the package are: two Pascal source programs that provide string to numeric conversions (either real or integer); source code examples showing how to interface the Apple Graphics Table to Pascal programs; and a helpful assembly



language routine that lets you use Apple's Communications Interface Card to achieve bidirectional (full duplex) communications from Pascal. Detailed source code has been provided in lieu of extensive documentation. With the Pascal Animation Package, you'll receive: 1) two Pascal Animation Package diskettes; 2) user instructions  
**PRICE: \$75.00**

**TITLE: PASCAL ANIMATION TOOLS**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Produce exciting, animated graphics as quickly and as easily as text. Lets you develop distinctive fonts of graphic shapes or pictures (a horse font, for instance, with stop action pictures of the animal in various stages of running), then string these snapshots together in sequences that mimic movement. This approach also allows you to build a library of useful shapes that can be accessed quickly and used over and over again in your animations.

This program:

- lets you use Pascal to write and manipulate programs with complex, animated graphics so you save time developing software;
- allows you to print out high resolution shapes at text speed so you're able to create animations that behave smoothly and realistically;

- provides a ready made, efficient way to create libraries of shapes, many of which can be animated with the same movement codes so you reduce software development costs, and manage animation projects more efficiently.

Uses a specially developed, binary input/output system (BIOS) that knits the Apple's high resolution screen to its text facilities. This innovation allows you to create a set of images- shapes of a bird in flight, for example- and treat it exactly like a character font. In other words, if you let A correspond to the bird's wings up and B to its wings down shapes, a Pascal program that printed A, then B, then A (and so on) would result in a bird flapping its wings- slowly or quickly as wished. Intermediate images could also be added to make the motion as smooth as desired.

Contains a number of programs, all extremely helpful for programming animated graphics. The Animation program- provided in source code, lets you do character cell animation under control of the Apple's Hi Res 1 programmable character generator. Seven demonstrations programs, provided in source code, are also included in the Pascal Animation Tools package to illustrate the simplicity and flexibility of Animation.

Another program, Charedit, is a fast, powerful, high resolution character editor which you can control with either your Apple's keyboard or game paddles. Teamed up with Animation, Charedit lets you use a variety of dramatic animation techniques.

Also included in the package are: two Pascal source programs that provide string to numeric conversions (either real or integer); source code examples showing how to interface the Apple Graphics Tablet to Pascal programs; and a helpful assembly language routine that lets you use Apple's Communications Interface Card to achieve bidirectional (full duplex) communications from Pascal. Detailed source code has been provided in lieu of extensive documentation.

**PRICE: \$75.00**

**TITLE: PASCAL GRAPHICS**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** This package is the Hi-Res graphics dump to printer

required for those using Pascal. Works with all four standard Apple interface cards and both the parallel (7720B) and asynchronous serial (7710A) cards from California Computer Systems. The dump to printer routine may be added to the user's Pascal library as an intrinsic function. Printers supported with Pascal Graphics are listed below:

7505 Pascal Graphics for the IDS Paper Tiger 440g/445G

7562 Pascal Graphics for the IDS Paper Tiger 460G/560G

7586 Pascal Graphics for the Epson Mx-80/MX-100

7596 Pascal Graphics for the Anadex 9501/9500

**PRICE: \$44.95**

#### **TITLE: PFS: GRAPH**

#### **PUBLISHERS NAME: SOFTWARE PUBLISHING CORPORATION**

**DESCRIPTION:** Picture this.

Presentation-quality bar charts, line graphs and pie charts. In black-and-white or color. In seconds.

That's PFS: GRAPH. The fastest, easiest, most economical computer graphics software package you can buy.

Learn to graph in less than an hour.

GRAPH is the ideal software package for the professional who needs graphs or charts in a hurry, but doesn't need to become a computer expert.

All you do is specify the kind of graph or chart you want and enter your information. GRAPH does the rest. So instead of making a lot of complicated calculations, you can make graphics. Right away.

You can display up to four graphs on a single set of axes. Mix and match line and bar graphs. Stack bar graphs or display them side-by-side for comparison.

Automatic formatting, scaling, legend labelling, and pattern fill make it simple to create clear, useful graphs and charts for sales presentations, meetings, reports and documentation.

GRAPH is the first stand-alone graphics package that also interfaces directly with PFS and Visicalc files.

Let's take an example.

Say you're a wine distributor and you want to graph shipments by region and type of wine.

First you call up the GRAPH menu and choose what you want to do. In this case it's "Get/Edit Data" (#1):

On the Get/Edit Data menu, you may enter new data by typing it on the keyboard, or use an established VisiCalc or PFS file. Here, we're choosing to enter new data (#1):

You can have up to four graphs on one chart. For each of the four graphs you get an x-y data format to fill in. Here we're entering data for graph A- the number of cases of Cabernet sold in three regions. We would then go on to enter data for Zinfandel in graph B, Chablis in graph C, and Chardonnay in graph D.

Let's define how the chart should look. By filling in the blanks, we choose four bar graphs representing "May Shipments by Region". We define the x-axis as "region" and the y-axis as "# cases". Note that we chose not to stack the graphs and not to add color or background grid.

Now we're ready to display the finished four-bar graph, which appears with side-by-side comparison bars, automatically labelled and filled with differentiating patterns.

But maybe you'd rather have the bars stacked to show totals. Just change "no" to "yes" on the Define Chart menu, and display it again. GRAPH automatically rescales and relabels to create a well-balanced chart.

How about a pie chart of just the May shipments of Chardonnay? Simple. Complete with a new legend of regions and percentages.

Or maybe you'd like to see the year-to-date shipments of Chardonnay, forecast versus actual.

Beginning to get the idea just how easy and versatile PFS: GRAPH really is? Easy to start with. Easy to work with. Easy to get just the right chart or graph for your presentation.

Software that pays for the system.

Compared to hand-drawn graphics, GRAPH can save you enough money on your first set of charts to pay for itself.

And over the course of a few months, it could save you enough to pay for the Apple computer system it works on. Including the printer or plotter of your choice. GRAPH interfaces with a variety of printers, including Silentype and Epson, as well as the low-cost Hewlett-Packard 7470A color plotter.

And it's from such a nice family.

GRAPH is the third member of the popular PFS Software Series for Apple II and III. PFS is a Personal Filing System that works like a paper filing system, without the paper. PFS: REPORT uses the data in the PFS files to sort, calculate, total and format management reports.

And there are more PFS software packages on the way. Each designed with the powerful simplicity that makes PFS the hardworking software family that isn't hard to work.

**PRICE:**

#### **TITLE: PILOT ANIMATION PACKAGE**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Teachers: bring your Computer-Assisted Instruction (CAI) programs to life with the PILOT Animation Package. Used in conjunction with PILOT Author System, this program is a complete animation "tool shop." Put it to work to illustrate important points, dramatize concepts and principles, and capture you student's attention.

The PILOT Animation Package: lets you write complex graphics programs without prior software expertise; provides an easy-to-use environment...so your animation task is simplified; stores animation sequence files...so you can quickly access and reuse them.

When used with the PILOT Author diskette, the PILOT Animation Package's Animator program lets you build and edit special data files of images. Then you can call these files in sequences in such a way as to animate the images.

You would begin, for instance, by visualizing the particular image you wish to animate, and breaking down the various stages of its motion into key "snapshot" images. Simply use the Standard PILOT Author System's character generator to construct these key images - or assemble them from an existing character font "library" of images that you've already created and stored. Next, use the Animator program to put images in motion. You'll end up with a data file of key images in sequence which - like the individual frames of a motion picture - create the illusion of movement. This animated sequence can also be called easily form any PILOT lesson.

The PILOT Animation Package lets you manipulate shapes with simple PILOT statements. If the character set happens to represent a kangaroo, for example, you can easily command the appropriate frame-by-frame options to make the animal bounce across the screen. Then, by transferring Animator files to your PILOT lesson diskettes, you can incorporate the animation sequence into your desired program.

The PILOT animation Package also includes "Maxwell" - a program demonstrating the simplicity and flexibility of PILOT animation - as well as "Hormuz" and "Dr. Memory," two excellent, sample PILOT lessons. In addition, the PILOT lesson "Immediate" - also



included in the package - allows you to review your animations on the spot, without having to insert them into complete PILOT programs.

To incorporate animation sequences developed with this package into PILOT lessons, you'll also need: The Apple PILOT Author system. With the PILOT Animation Package, you'll receive: 1) PILOT Animation Package program diskette; 2) instructions.

**PRICE: \$75.00**

**TITLE: PLOT II**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Allows for lettering and plotting data on the low cost Houston Instrument HILOT (DMP-2) plotter of data files created with Apple Plot. Our software driver runs at the rated speed of the plotter and will accommodate up to 9 sets of data for bar charts which is not normally available to Apple Plot using graphic prints for hard copy. May be used to produce transparencies for use with overhead projectors. User defines how each data set is to be displayed- nine different bar shadings are available; all parameters except data itself may be modified. PLOT II is not a screen dump; all lines and lettering are redrawn for highest resolution. PLOT II is supported with either the Apple serial or California Computer Systems model 7710A serial interface cards.

**PRICE: \$44.95**

**TITLE: PRESENTATION AID**

**PUBLISHERS NAME: ENERGY GAMES**

**DESCRIPTION:** A business Graphics package that provides the user with the capability to prepare and give stand up presentations using color monitors. Graphics pictures, text screens and large word flipchart screens are all supported, including such features as scrolled flipchart lines, graphics pointer, forward/backward control of presentation sequence through the use of remote control unit.

**PRICE: \$250.00**

**TITLE: PRINT O GRAPHER**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** This versatile package will transform any Hi-Res screen into a permanent hardcopy in just a few simple keystrokes. Completely menu-driven, the PRINTOGRAPHER requires no special knowledge of either graphics or printer commands.

The PRINTOGRAPHER offers many features that give you complete control over the appearance of the final printout. You can easily select to print out in NORMAL (black on white) or INVERSE (white on black) inking, and also whether to have your picture printed either HORIZONTALLY or VERTICALLY. Another unique option is PICTURE MAGNIFICATION up to 9 times the original size with the PRINTOGRAPHER. You can also MOVE your picture anywhere on the page to be printed. As if that weren't enough versatility, the PRINTOGRAPHER lets you print either the entire HI-RES screen or any portion of it with its SPECIAL CROPPING feature. By combining this powerful feature with the magnification option, you can quickly magnify and print just the portion of the Hi-Res screen you desire.

The PRINTOGRAPHER allows you to print out picture which are in memory or it will load them from disk for you. When disk loading is selected, only the pictures files are displayed in the menu for your convenience. Also included is a handy subroutine you can insert into any of your Applesoft programs that will print



out any Hi-Res screen in seconds!

OK, but will it work with my printer? YES! The PRINTOGRAPHER is designed to support just about ANY PRINTER OR PRINTER INTERFACE with graphics capability. If your hardware is not listed below, you can easily configure The PRINTOGRAPHER by just responding to the questions in the configure program. The PRINTOGRAPHER comes with an easy to use MENU-DRIVEN configuration table for all of the following printers and printer interfaces and takes only seconds to complete.

**PRICE: \$49.95**

**TITLE: ROGER'S EASEL**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** A paddle oriented color sketch program using lo-res graphics. At last, a program that allows you to draw color pictures in lo-res graphics, and then permanently link them to your own Integer or Applesoft programs.

**Features of Roger's Easel:**

Easily store and recall pictures from tape or disk.

Link up to 41 user created pictures to your own Integer or Applesoft programs.

Instantly display any of the linked pictures under program control.

Immediate access to list of commands and detailed instructions within the program.

Plot only where you want to. Frase with a single keystroke and automatically resume original color when done.

Besides being just plain fun, applications range from putting more creative screen images in your game programs to educational programs for younger children involving shape or color recognition.

Program includes: ROGER'S EASEL, LO-RES INTEGER AND LO-RES LINK APPLESOFT.

**PRICE: \$9.95 Cassette, \$13.95 Diskette**

**TITLE: SCIENTIFIC PLOTTER**

**PUBLISHERS NAME: INTERACTIVE MICROWARE, INC.**

**DESCRIPTION:** This versatile and easy-to-use program draws professional looking graphs. Plotting your results with Scientific Plotter is much easier, faster, neater and more accurate than plotting your data by hand. Data may be input from the keyboard, from the disk or it may be calculated by your own subroutine. In each case, the data may be supplied either as X, Y pairs or as Y values at a constant X interval. Since 20 different plotting symbols are provided, you may plot more than one set of data on the same graph. Also, error bars of variable length may be used to indicate the range of error for each point. Scientific Plotter gives you complete control of the length and position of each axis, the grid size and the interval between numbers that are printed along the axes. Thus, it is possible to plot data in one, two or four quadrants and different scales may be superimposed on the graph, using an alphabet of 76 letters and scientific symbols which can be printed in four different orientations at 90 degree angles. The finished graph may be saved on disk for later review or it may be printed on a graphics printer.

Many features of Scientific Plotter make it easy to use. The program displays the allowable range for input values, based on previous answers, and warns of any errors. At any time, you may erase the graph and replot it with any desired changes. All previous answers become the defaults, so that you can make changes quickly. After the best format for your graph has been

selected, that format may be saved on disk for subsequent use with similar data. Five demonstrations are included on the disk so that you will learn quickly how to construct various types of graphs.

**PRICE:** \$25.00 disk with 30 page manual  
\$ 5.00 Scientific Plotter manual

**TITLE: SCREEN DIRECTOR**

**PUBLISHERS NAME: BUSINESS & PROFESSIONAL SOFTWARE, INC.**

**DESCRIPTION:** Screen Director retrieves and displays any standard image file on your Apple's video monitor, large screen TV or color printer. For only \$150, Screen Director gives you a filmmaker's finesse in boardroom presentations, management briefings and demonstrations for clients.

With Screen Director you can scroll forwards and backwards through any color displays, with dissolves or cuts from one image to the next- all at the touch of two buttons. You can even enhance your Apple Business Graphics with title slides in a variety of fonts and colors.

**PRICE: \$150.00**

**TITLE: SHAPE BUILDER**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Been waiting for a better way to create Hi Res shapes/symbols to liven up your own game or display programs? Then use our simple keyboard commands to move, plot, draw lines, vectors and circles, and save your shapes for easy inclusion in your next program.

**PRICE: \$25.00**

**TITLE: SHAPE EDITOR**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Create new Hi Res shape tables of shapes you select from previously saved tables or from enclosed pre defined shapes for all printable characters.

**PRICE: \$15.00**

**TITLE: SMART**

**PUBLISHERS NAME: SOFTWARE RESOURCES, INC.**

**DESCRIPTION: ANALYSIS AND GRAPHICS FEATURES:**

- \* Open-High-Low-Close/Volume/Open Interest Charting
- \* On-Balance Volume
- \* Date Scales for Daily, Weekly, Monthly, Quarterly, or Annual Data
- \* Choice of Scale Types (Arithmetic or Semilogarithmic)
- \* Trend Lines
- \* Moving Averages
- \* Exponential Smoothing
- \* Regression Analysis

**AUTOMATIC CHARTING.** SMART graphically presents all types of market and economic data in clear, easy to read graphic formats. These are done both on the computer screen and on paper. The formats are of your own choosing.

**DAILY UPDATING.** SMART retrieves market and price data from a national service using your phone lines. Its files are always as up to date as yesterday's closing figures. (You may also enter data manually if you wish.)

**COMPUTER ANALYSIS.** You tell SMART what you want - things like moving averages, on-balance volume, statistical analysis - by touching one or two buttons. The rest is all automatic,

performed at speeds you'll never match.

**ACCOUNT MONITORING.** SMART maintains your account positions and links them to market price/data for daily account monitoring and reporting.

**MACRO CONTROL.** With this important feature, once you've instructed SMART to produce a complex chart, you can repeat the operations for other variables with the touch of a single button.

**NETWORKING/HARD DISK.** With these options SMART gives big computer capability to the Apple. Even more speed, storage, and flexibility are available plus the ability to share data and programs among many computers.

**EXPANDABILITY.** SMART Analysis and Graphics is the first of several important and integrated products to assist you in the investment process.

**YOU GET FACTS AND FIGURES FASTER.** Everything you need in the way of charts and analysis appears quickly on the screen or on paper, in just the format you want.

**YOU'RE BETTER INFORMED FOR DECISION MAKING.** When you need the facts, SMART responds quickly, reporting them in clear, crisp graphic formats that are complete, informative, and easy to read.

**YOU'RE FREE FOR MORE IMPORTANT MATTERS.** That's where efficiency comes in. You'll get more done in a day.

**YOU ELIMINATE CHART MAKING.** Instead, SMART does it all automatically at the push of a button, releasing you from the time consuming business of doing them by hand.

**IMPORTANT FEATURES OF ACCOUNT MONITORING:**

- \* Master Reports
- \* Appraisal Reports
- \* Gains and Losses Reports
- \* Cost Basis Reports
- \* Choice of screen or hardcopy output, ranging from summary level to detail security lot reporting.
- \* Handles equities, fixed income securities, mutual funds, options, Treasury bills, and money market funds, including long and short positions
- \* Automatic price updating at a low monthly charge
- \* Multiple account capability

Software Resources, Inc. developed the SMART System in conjunction with a leading financial institution. Software Resources is a service oriented company which provides its customers with many forms of on-going support. Subscribers to the SMART service are continually updated as enhancements and additions are released, and will receive informative newsletters.

**PRICE:**

**TITLE: SPECIAL EFFECTS**

**PUBLISHERS NAME: PENGUIN SOFTWARE**

**HARDWARE REQUIREMENTS: paddles or joystick, or, optionally, a graphics tablet.**

**DESCRIPTION:** Brand new graphics utilities for the Apple II. A new brush mode lets you "paint" with various size brushes in any of 108 colors, allowing unbelievably intricate shading, and taking Apple graphics out of the "coloring book" era.

Magnification of pictures by factors of two or four give you direct access to point by point editing.

Picture packing routines reduce screen image storage by 30 to 70%, giving 4 to 10 pictures in RAM, and 16 to 50 on one disk.

Extra tricks allow color reverses, picture flips, mirror images, and partial screen movement onto the same or opposite screen.

As with all of our graphics products, documentation tells you how to use our routines in your programs.

Bonus for Complete Graphics System owners: An included font converter allows you to use other popular fonts with the CGS



character generator.

**PRICE:** For paddles or joystick.....\$39.95

For Apple tablet or Hi-Pad.....\$69.95

**TITLE: STATION MASTER**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Computer Station has long been known for its graphic developments for the Apple Computer. The Dithertizer II is a video digitizer board which loads the hi-res screen with a video camera. Combined Enhanced Graphics Software (CEGS) dumps the contents of the hi-res screen onto paper for a large variety of printers by means of a low cost software package.

We now introduce the Station Master. The Station Master is a universal parallel card with the added capability of being able to put the hi-res screen on paper with simple keyboard commands. The Station Master may be used with ANY one of FOUR different printer types.

As with our CEGS, there are options for dumping page one or two, normal or expanded size, picture or plot, and horizontal positioning.

The Station Master card is supplied with printer cable so you just plug in and go. We also include a diskette with practice pictures and plots as well as drivers for use with Visiplot.

**PRICE: \$175.00**

**TITLE: STOCKPLOT**

**PUBLISHERS NAME: WARNER COMPUTER SYSTEMS, INC.**

**DESCRIPTION:** STOCKPLOT is a program to retrieve, store and graph historical Stock market data.

STOCKPLOT was developed by a stockbroker to follow performance of common stock investments on a daily-basis. It is ideal for the individual who wants to get a clear picture of the performance of his portfolio at very reasonable cost.

STOCKPLOT was designed for non-computer people.

It's easy-to-use menus allow the investor to:

- a) graph sixty-five days and sixty-five weeks of high-low history
- b) update the portfolio with daily data
- c) buildhistory for any of the 15,000 stockson Warner Computer Systems.

- d) print selected graphs (if a printer is available)

The system utilizes data supplied on-line by Warner Computer Systems. All stock items required to prepare charts are downloaded automatically to the Apple II from Warner's timesharing computer.

**PRICE:**

**TITLE: STROBE PLOT**

**PUBLISHERS NAME: STROBE, INC.**

**DESCRIPTION:** A menu driven, High Resolution graphics program designed to help you combine the advantages of your Apple computer with your Strobe Model 100 plotter.

Interfaces with Apple Plot and allows the user to display the data on a monitor in a variety of different graph formats. The Strobe Plot is called by the user. The chart characteristics are specified and the graph or chart is produced in High Resolution reproducible copy by the Strobe Model 100 plotter.

Strobe Plot then allows the user to save the data and the graph characteristics. The merging of a Data file and an Option file, containing the graph characteristics, produces a chart, graph or isometric drawing.



The main menu consists of creating data files, creating options files, or plotting data files.

Create A Data File- this allows the user to create and save a Data file consists of X-Y points.

Create An Option File- this allows the user to create and have a series of chart or graph characteristics.

Plot A File- this allows the user to merge any Data file with an Option file and create a graph, chart or isometric drawing.

Strobe Plot is offered with a series of demonstration Data files and demonstration Option files on the disk. Written so that it will not accept values which are not consistent with the menu requests. Each file may contain up to eight lines with 100 points per line.

PRICE: \$125.00

#### **TITLE: SUPER DRAW AND WRITE**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

DESCRIPTION: Superfont has nine sizes of letters and eight styles. Machine language scrolling. Array save a page at a time in minimum amount of disk space. Instant Graphics (sound option) has floating dot cursor and draws anything, just like a Graphics Tablet- saves, retrieves- with or without sounds (drawing tones).

PRICE: \$17.95

#### **TITLE: SUPER PIX SOFTWARE**

**PUBLISHERS NAME: MICRO WARE**

**HARDWARE REQUIREMENTS: Parallel printer board PPC-100**

DESCRIPTION: This utility program, on disk, permits the user to dump Hi Res screen graphics from the Apple to OKI or EPSON. The transfer can be made in various sizes, orientations, and normal or inverse modes. The software is self documenting.

PRICE: \$39.00

#### **TITLE: SUPER SHAPE ANIMATE**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

DESCRIPTION: With this disk you get all the programs you need to create animated shapes fast and easy. There are two types of animation to consider here:

- 1) A spaceship moving through space is one shape being drawn and erased and redrawn a short distance away, and so on...This is simple, and well explained in this package.

BUT

- 2) The type of animation where a person is walking or a horse is galloping is much more challenging. This is dealt with extensively in this disk.

You'll have people or animals walking, swimming, talking, or doing any kind of movements.

There are programs to examine, to edit, to create animation shapes from shapes from shapes that you have created with our SUPER SHAPE DRAW disk.

You may start with one drawn shape and change only parts (i.e. legs and/or arms) of this shape to create the remaining shapes needed for your animation sequences. There are programs to test out your creations, sample animation programs, demo programs, etc.

PRICE: \$19.95

#### **TITLE: SUPER SHAPE DRAW**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

DESCRIPTION: A shape-table-creating program. Contains features

such as:

- \* EASE IN DRAWING- Draw up, down, right, left, and in 4 Diagonal Directions with the touch of one key (no turning Plot mode on and off for diagonal moves).
- \* PERFECT KEYBOARD COMMAND- You never need to look down at the keys as you draw.
- \* NO DELAY- The plotting on your screen is not one step behind, like in many other programs.
- \* CONTINUE FEATURE- Plan a 10-shape table. Draw 5 today, 5 tomorrow. Continue program lets you start where you left off. No need to begin again.
- \* SHAPE VIEW Program- Draw your shapes and check how they're saved. View all your shapes in order, or just view the ones you want to see (by number).
- \* EDIT FEATURE- Shape #6 is yechchch? Use edit and redraw #6 entirely (using the same number of bytes as the first #6).
- \* ADDRESS OPTION- Put your table where you want it (or use our automatic addressing if you want).
- \* INFORMATION OUTPUT- After drawing, you'll give your table a name; it will be saved (on separate disk, or on the program disk), and all the information you need for using it will be displayed on the screen: Name, address, length, and number of shapes in the table.
- \* ERASE FEATURE- If you're half-way through a shape and you decide it's not what you want, ERASE clears the screen and lets you begin that shape again. You never need to redo more than one shape.
- \* SIMPLICITY- Entirely menu-driven. No computer knowledge is necessary.

**PRICE: \$19.95**

**TITLE: SUPER WEAVER**

**PUBLISHERS NAME: NIBBLE**

**HARDWARE REQUIREMENTS: Written with controls for the IDS 440 printer**

**DESCRIPTION:** Simulates an 8 Harness Loom in High Resolution Graphics. Simple Keyboard Commands allow the user to enter the Threading, Tie-Up, and Treading of the Loom to produce the woven pattern on the screen. The finalized pattern can then be printed as a Draw-Down on a Centronics compatible Parallel printer.

**PRICE: \$24.95**

**TITLE: TABLET SHAPEMAKER**

**PUBLISHERS NAME: ROCKY MOUNTAIN SOFTWARE**

**DESCRIPTION:** With this software and the Apple Graphics Tablet creativity can really commence. Extra commands allow for the building of standard Applesoft Shapetables directly from the tablet including indexing, full Hi and Lo bit colors, outlines, scanned blocks, etc., in the display mode these shapes may be rotated, enlarged, shrunk, and even animated. To build a logo or picture the regular tablet commands still function but extras such as color brush and label give greater flexibility.

**PRICE: \$99.00**

**TITLE: TABLET-GRAPHICS**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** All the capabilities of PADDLE-GRAPHICS extended for use with Apple's graphics-tablet. Applesoft and machine language. 48K.

**PRICE: \$49.95**

**TITLE: TEKSIM THE APPLE II/TEKTRONIX 4010 SIMULATOR****PUBLISHERS NAME: ABW CORP.**

**DESCRIPTION:** A read-only memory (ROM) that enables your Apple II to be used as a computer graphics terminal when connected to a computer other than the Apple, i.e. a host computer. Using the Hi-Resolution plotting capabilities of the Apple II, TEKSIM emulates Tektronix 4010-series terminals from the 4006 to the 4010. Characteristics of the 4010 are precisely simulated. Since the graphical resolution of the Apple II is roughly 1/4 of the Tektronix (280 x 192 vx. 1024 x 780), TEKSIM can never produce an image as good as the Tektronix terminal. For most applications, however, image quality will be sufficient, especially when the cost advantage of the Apple-TEKSIM combination is considered. In conjunction with the Apple, the basic features of TEKSIM allow you to:

- a) Display graphics output from a program residing on a host computer, without having to modify that program.
- b) Send graphical input to a host computer using game paddles or a joystick.
- c) Issue local command for screen erasure and to return to the Apple monitor.
- d) Produce multicolored graphics displays by making only trivial changes of the host resident program.

TEKSIM consists of a ROM chip and a special adaptor unit that must be plugged into socket D8 inside the Apple II.

**SPECIFICATIONS:**

- \* Installation; ROM socket D8 on either Apple mother-board or integer BASIC ROM Card.
- \* Baud rate; maximum 1200bps may be increased up to 9600bps with Teksim Host Interface Card.
- \* Resolution; 280 pixels horizontal x 192 pixels vertical.
- \* Software character set; 32 lines of 68 characters, with wraparound and paging.
- \* Serial interface card recommendations; Apple Communications Card; D.C. Hayes Micromodem II; TEKSIM Host Interface Card.
- \* Apple memory requirements; 16K bytes for basic Tektronix simulation; 32K-48K bytes for TEKSIM Application Packs
- \* Accessories; Apple II Plus Adaptor Card, TEKSIM Host Interface Card.
- \* Application packs; minifloppy disks interface TEKSIM to the: Houston Instrument Hi Plot plotter; Houston Instrument Hi Pad digitizing pad; Apple GRAPHICS TABLET.
- \* Comments; A serial interface card is required for communicating with the host.

**PRICE: \$475.00****TITLE: TEXT TYPE PROGRAM****PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** For those who need text mixed in with high-resolution graphics. Text-type allows you to do it easily and offers a choice of 15 character sets including lower case. Diskette and manual from Computer Solutions. Requires 48K, Applesoft.

**PRICE: \$34.95****TITLE: THE ARTIST****PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** The ARTIST is complete graphics and animation system for the development of game and business software.

The routines in this package have been in use in the development of ON-LINE's arcade HI-RES adventure games since our beginning.



Over those many months, they have gone through extensive revisions so they can truly be called "tested" and "state of the art". If you know ON-LINE products that use HI-RFS graphics, you have seen the work of the ARTIST.

If your interest is in color graphics, the ARTIST offers utilities so that you may easily sketch on the HI-RES screen. Twenty-one beautiful colors are available to "paint" your screen in seconds.

The true forte of the system is its animation abilities. The ARTIST offers six different forms of animation (the fastest animation available on any graphics system) to help your screen come to life. Collision detection (the ability to know when a missile strikes a space ship) is also included so that you may easily create arcade games of professional quality.

A large assortment of programming routines are also available for the creation and editing of machine language shape tables, customization of fonts, and the addition of text to the HI-RES screen. Many of the features in this package can be used in everyday programming.

**PRICE:**

**TITLE: THE COLORING BOARD**

**PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**

**HARDWARE REQUIREMENTS: game paddles or joystick**

**DESCRIPTION:** A complete low cost graphics software package for your Apple computer. Now you can create, change, store, letter (upper and lower case) and retrieve colored or black and white drawings as easy as writing your name.

Simply press a key from your keyboard and the program takes over. In case you forget what to do next, we have included a Help Menu that will appear on the screen by simply pressing a key.

When your picture is finished, you can label it with alphanumeric characters of various sizes and colors, in upper and lower case letters directly from your keyboard in any of 6 Hi Res colors.

The program allow you to label your pictures after they are finished. All the characters from the keyboard will work. Also, there is a special key that allows the use of lower case lettering as well.

Have black, blue, green, white, orange, or violet letters appear anywhere on the screen using your keyboard as a typewriter.

Entirely keyboard driven and contains several menu options as well as a dynamic help command menu. Comprehensive error trapping devices exist throughout the program to prevent any type of errors.

**PRICE: \$60.00**

**TITLE: THE COMPLETE GRAPHICS SYSTEM II**

**PUBLISHERS NAME: PENGUIN SOFTWARE**

**HARDWARE REQUIREMENTS: paddles or joystick, or, optionally, a graphics tablet.**

**DESCRIPTION:** A Drawing module allows you to draw on the Hi-Res screen using paddles or joystick. Options include an automatic filling routine with over 100 blended colors, a "paintbrush" mode that turns your cursor into one of nine different size and shape brushes (you can also define your own), and a shape mode that lets you rotate, scale, and plot shapes from a shape table. You can also easily draw lines, circles, and ellipses. Drawings may be saved for use by other programs.

A text module lets you put text at any x,y location on the Hi-Res screen (not just at specified rows and columns). A standard upper/lower case character set is provided, along with a large set twice as tall and wide. The large font may be used with most



of the 100 fill colors. Typing may be set to overlay the background, reverse the background, or erase the background. A character editor allows you to create and edit your own large and small fonts. Creating your own graphic character sets gives you a fast, colorful alternative to using shape tables for animation. The 3-D Graphics module lets you create, view, and manipulate 3-D objects. Up to 50 color figures may be in memory and viewed simultaneously, yet each figure is capable of being manipulated individually. An added module lets you draw 2-dimensional "panels" on the screen (for example, the surfaces of a house). The 3-D module will then allow you to assemble these panels into a 3-D object- without having to use a single X-Y-Z coordinate! Any figure may be rotated, scaled, moved, and distorted (scaled in one direction) with machine language speed. Several editing functions allow you to move points and lines, change colors, and enter, change, and delete coordinates. Any particular view of the figures may be saved as a picture to be used with the other modules or your programs.

The Shape Table module allow you to create and edit Apple shape tables for use in the drawing module or your programs. Shapes may be created and edited either by keystrokes or by drawing with the paddles.

A Shrink utility allows you to shrink your pictures to 1/4 size, so that four may be displayed at a time. By re-using "Shrink", you may reduce pictures further.

Programmers' instructions are included for using pictures, shape tables, 100 color fill routine, and text writer in other programs, along with file structure information for 3-D files.

**PRICE: For paddles or joystick.....\$69.95**

**For Apple tablet or Hi-Pad.....\$119.95**

#### **TITLE: THE CREATIVITY LIFE DYNAMIC PACKAGE**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** With this disk comes 2 drawing cards and an 88-page program manual. Using our instant drawing programs allows you to replace the graphics tablet with inexpensive software. Draw circles, ellipses, triangles, frames, enclosures, fireworks, squares, etc., all at the touch of a key or 2. Draw 8 people, 8 different expressions, combine many ways, animate, all by hitting a key or 2. Write poetry and music, save your tunes, play them back- see the correctly named noted on the screen.

**PRICE: \$24.95**

#### **TITLE: THE CREATIVITY TOOL BOX**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Draw, write poetry, music. Includes Action Sounds, Hi-Res Scrolling, routines, shape tables with shape view program, utilities, animation demo, and fonts.

**PRICE: \$44.95**

#### **TITLE: THE DESIGNER**

**PUBLISHERS NAME: ARCHIVES**

**DESCRIPTION:** The Designer graphics operations give you complete control over every dot on the display. Draw logos, symbols, designs, diagrams, curves, lines- any display you wish. It's easy to use, even for a beginner.

You can add to and remove portions of the image without erasing the entire display. Thus you work with a continuous, uninterrupted display until the desired result is achieved.

The Designer is a user oriented Applesoft program that does the HPLOTting for you. Sometimes referred to as the 'poor man's

graphics tablet', it places lines and complex circular functions on the APPLE HIRES screen with the use of game controls and single keystrokes. A position on the screen is selected by moving a cursor to the point using the game controls. A line to that point from the previous point can be drawn in colors 0-7 simply by hitting the 'L' key. All other functions operate in a similar manner. At any point the drawing can be saved to disk and another drawing recalled. Features include a page 1 & 2 flip flop for those interested in two page animations. Applications seem to vary from showing-off to game graphics setups to serious design and CAI uses.

**PRICE: \$19.95**

**TITLE: THE FORECASTER II**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION:** Our original forecaster program has been upgraded to label the Hires Graph Screen by using a small portion of the Hires graphic printer program. The Forecaster II now does a linear regression trend analysis on your data and automatically labels the Hires graph screen for easy reading. The Forecaster II has been fully tested and is an excellent trend analysis program.

**PRICE: \$26.95**

**TITLE: THE GRAPHICS MAGICIAN**

**PUBLISHERS NAME: PENGUIN SOFTWARE**

**HARDWARE REQUIREMENTS:** paddles or joystick, or, optionally, a graphics tablet.

**DESCRIPTION:** The Graphics Magician is the software package for which every programmer (and aspiring programmer) has been waiting. This one package includes software that lets you create smooth animation in your own programs, add graphics to adventure games (or any other programs that require many pictures and objects to be easily and quickly accessible), and create and use a new type of Apple shape table that can include color and angular movements.

The animation programs allow you to design object tables and path tables through program prompting, then, by loading them into your own programs, animate the objects by calling the machine language animation routines provided.

The picture/object editor allows you to create hi-res pictures and objects in a manner that allows them to be saved in a fraction of the space normally used for pictures, then quickly recalled and reconstructed. Using this method, hundreds of pictures could be saved on a single disk. By attaching a provided machine language subroutine to your programs pictures can be easily reconstructed, and objects located anywhere on any picture. These same routines are being used to create and display the graphics for a major adventure publisher's new line of graphic adventures. Among other things, the picture editor uses an improved version of the 100 color fill routine and the paintbrush routine from those two packages.

The new shape editor, written by David Lubar (co-author of Special Effects), allows you to create a new type of shape table that includes color and angles that are preserved on scaling and rotations. Shapes in these tables are more compact than those in normal Apple shape tables, and the subroutines used to display them can be used in your own programs. The system supports scaling, rotation, and a speed factor that lets you slow down shape display (so you can simulate handwriting or drawing more realistically).

**PRICE: \$59.95**

**TITLE: THE GRAPHICS PRINTING SYSTEM**

**PUBLISHERS NAME: CROW RIDGE ASSOCIATES, INC.**

**DESCRIPTION:** A high speed program for producing elegant hard copies of Apple II high resolution graphics tailored especially to daisywheel and spinwriter type printers.

**PRICE:**

**TITLE: THE ILLUSTRATOR**

**PUBLISHERS NAME: ISLAND GRAPHICS**

**DESCRIPTION:** THE ILLUSTRATOR gives graphics tablet abilities and more to your game paddles or a joystick. Draw original artwork, fill with colors, add text and save it to your disk.

If you already have the tablet, you're ready for the illustrators speed, brush sets, straight lines, color palette and incredibly fast fill. Switch between the tablet and paddles any time with the touch of a key - or use the keyboard for precision cursor control. All functions work with both the graphics tablet and the paddles.

THE ILLUSTRATOR is easy to use. Menus are never more than a keystroke away - and most menu selections may be activated with a pen press on the tablet or a button push on the game paddles. Select brush styles for wide lines or for stamping single copies of the brush design anywhere on the screen. Create brush designs instantly, and add them to the menu - save custom brush menus on the disk for future use.

Designing is a breeze on THE ILLUSTRATOR. Try "what if" ideas and save your designs in various stages. You can use THE ILLUSTRATOR to design artwork, needlework and mock-ups. Perhaps you'd like to show how you want your new ad to look, or illustrate last year's monthly sales figures. You'll be able to show them, in any of 17 billion possible color combinations (color patterns) mixed on the palette - or chosen from the color menu. Save custom color patterns to the color menu, and even save whole menus of colors to the disk for instant recall.

Label your illustrations with the text generator - in any of the colors and in 4 different sizes - anywhere on the screen. Other character font sets may be loaded into the ILLUSTRATOR for your use.

Let THE ILLUSTRATOR generate circles, boxes, frames and lines to your specifications. Make a stamp of your signature for the bottom of your original masterpieces. Make a collection of your favorite pictures to show to friends.

Use the magnify feature to easily identify and correct individual pixels (dots). All functions are operational in the magnify mode!

THE ILLUSTRATOR will create effects which are not possible in any other medium. You can snap a picture of any screen section, move it anywhere and stamp it. You can even slide pictures across the screen and use the "wrap-around" effect.

**THE ILLUSTRATOR MAKES COMPUTER GRAPHICS EASY**

- Fast
- Over 17 billion color combinations



- Palette for color mixing
  - Hi-res brush sets
  - Design your own brushes
  - Fast color fill
  - Magnify X 7
  - Rubber-band lines & boxes
  - Hi-res text labeling
  - Slide picture
  - Frames
  - Boxes
  - Circles
  - Continuous lines
  - Brush Menu
  - Stamps
  - Select background colors
  - Change colors
  - Invert colors
  - Complement colors
  - Save and load original artwork and much much more.
- PRICE: \$95.00**

**TITLE: THE PASCAL GRAPHICS EDITOR**

**PUBLISHERS NAME: SERUS SOFTWARE**

**DESCRIPTION:** A complete editing package for creating fonts, pictures, and partial images within the Apple Pascal environment. Includes powerful utilities for use in your own programs for drawing ellipses, triangles, parallelograms, moving or saving blocks, and loading of pictures to disk or to any array. This package is for the professional who needs advanced editing of graphics and the ability to define character sets of various styles and sizes.

**PRICE: \$114.95**

**TITLE: THE SCREEN MACHINE**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** Lets you redefine any keyboard character, create new character sets - foreign alphabets, electronic symbols etc. Save character symbols for later use.

**PRICE: \$19.95 Cassette**

**TITLE: THE SHAPE PACKAGE**

**PUBLISHERS NAME: CALIFORNIA SCHOOL FOR THE DEAF**

**DESCRIPTION:** Containing Shaper, the program which enables you to create sophisticated line drawings using the computer keyboard only. Shapes may be in color, in any scale from 1 to 255, rotated, viewed in two scales simultaneously. In addition, the paint chip program converts shapes or pictures created on an Apple Graphics Tablet to images (as utilized by the blocks author system), creates rubber band lines, does point plotting for fine enhancement of graphics, and initializes Graphics Library Disks.

**PRICE:**

**TITLE: THE SLIDE SHOW**

**PUBLISHERS NAME: C & H VIDEO**

**DESCRIPTION:** Allows the Apple to emulate a 35MM slide show on your television with TV like special effect transitions between standard High Res Pictures (slides). Offers 20 different transitions (e.g., horizontal/vertical wipes, overlays, fades, ripple effect, etc.). Slides may be advanced manually by keypress or paddle pushbutton, or advanced automatically by time



(up to 999 seconds) or free run.

A Slide sequence may consist of up to 75 High Res Pictures and can be set to automatically repeat. Supports either single or multiple disk drives. The creation and editing of a sequence may be obtained at any time. This package was originally designed for the use of Apple Graphics in television products and is compatible with NTSC Signal Processing Hardware.

**PRICE: \$49.95**

**TITLE: THE SPACE TABLET, A 3-D GRAPHICS TABLET**

**PUBLISHERS NAME: MICROCONTROL SYSTEMS**

**HARDWARE REQUIREMENTS: paddles or joystick**

**DESCRIPTION:** The Space Tablet is a unique new device that functions as a regular graphics tablet, but also allows three dimensional input when needed. With the Space Tablet you can draw and trace pictures, maps, graphs, etc. in two dimensions and have the image shown on the screen, as you would with any other tablet, but you can also trace three-dimensional objects, real or imaginary, then view and edit them from any angle via the computer. The hardware is from Micro Control Systems, Inc. and the software is a customized version of The Complete Graphics System from Penguin Software. The tablet has a 16" by 13" clear surface that can be placed over maps, architectural drawings, pictures, etc. for tracing. Two buttons allow input control additional to the keyboard. The software gives you the same capabilities as the regular tablet version of The Complete Graphics System, plus, in the 3-D mode, instead of tracing only the two dimensional surfaces you can design objects directly in three dimensions. Machine language software that allows you to use the tablet 3-D input in your own programs is also provided with the Space Tablet. This incredible new hardware/software package is available now through Penguin Software or your computer dealer. There are two versions available. The 4 axis version allows you to actually lift the pen off of the paper and flex it in almost any direction. The 3 axis version does not allow this particular feature but all else is the same. Both versions include software and hardware.

**PRICE: 4 axis version .... \$595.00**  
**3 axis version .... \$475.00**

**TITLE: THE STEREO GENERATOR**

**PUBLISHERS NAME: R-ALPHA SOFTWARE**

**DESCRIPTION:** A unique program which allows the Apple user to define, manipulate, and view three dimensional objects. Stereoscopic object images created with the Generator may be viewed in fully perceived three dimensions.

Applications for the Stereo Generator are limited only by the imagination. Users include students of geometry and physics, chemists, drafting instructors, graphic artists, and interested hobbyists of all types.

The user may define arbitrary three dimensional objects comprised of segments. The program then generates stereoscopic image pairs on the second High Resolution screen, allowing the object to be perceived in three dimensions. Images may be generated in either normal or mirror stereo. Separate generation of expanded left and right images is also allowed. Split screen stereo- pairs may be viewed in three dimensions on the screen using a mirror. Alternatively, images may be printed and viewed with an inexpensive stereoscope which is included with the program. Using the game paddles for control, the object may be rotated a full 360 degrees about each of two body axes. (For those familiar with the terminology, the first two Euler angles are under

control of the game paddles). Generation time for a stereoscopic object image varies from one to fifteen seconds, depending upon the complexity of the object. Subroutines allow control of display modes, scale factors, depth perception, object definition, object definition, image superposition, orientation sequences, disk control, and printing. Screen images may be saved to disk for printing by any system which can print the second Hi Res screen. Object definitions and rotation sequences may also be saved to disk and recalled.

**PRICE: \$34.95**

**TITLE: THE SUPERPLOTTER**

**PUBLISHERS NAME: DICKENS DATA SYSTEM**

**DESCRIPTION:** A highly versatile, business, engineering, educational, math and graphics applications package. Presents the user with an excellent selection of options to be used in displaying input data on the selection of options to be used in displaying input data on the Apple II graphics screen. Also included is a powerful editor, an elaborate curve-fitting routine, easy to use keyboard image shape tables which provide the user with the ability to include text in any High Resolution graphics displays, and a convenient utility that automatically saves or loads High Resolution graphics displays to and from disk. All graphics displays may be dumped to any printer with graphics capabilities.

Designed to produce report quality graphics displays. Thus, to obtain the full benefit of the high quality Superplotter output, the user is encouraged to configure his system using a printer with graphics capabilities.

**FEATURES:**

- \* standard bar chart generation
- \* pie graph generation
- \* point and line graph generation
- \* graphics display of any mathematical function
- \* least squares polynomial curvefit generation
- \* keyboard image shape tables and user tutorial
- \* automatic graphics disk storage and recall
- \* data file editor
- \* overlay modes.

**PRICE: \$69.95**

**TITLE: U-DRAW II**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Easily draw and manipulate hi-res figures on your screen. Figures can be rotated, expanded or moved through keyboard commands, or automatically, using a mini-programming language. Any figure you draw can be easily converted to a shape table to use in your Applesoft programs.

**PRICE: \$39.95**

**TITLE: ULTRA HI-RES GRAPHICS**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Ultra Hi-Res Graphics is a plotting program designed to take full advantage of the high resolution capabilities of dot matrix graphic printers. The program first writes to disk and dumps from disk to printer without being restricted to the 280 x 192 resolution of the Apple's hi-res page. It is designed as a utility package for programs written with all of Apple's interface cards and the following model numbers from California Computer Systems; 7710A, 7720A, 7720B, 7728.

7543 Ultra Hi-Res Graphics for the IDS 440G/445G

7563 Ultra Hi-Res Graphics for the IDS 460G/560G  
7583 Ultra Hi-Res Graphics for the Epson MX-80/MX100  
**PRICE:**

**TITLE: ULTRA-RES**

**PUBLISHERS NAME: DATA TRANSFORMS**

**DESCRIPTION:** Ultra-Res graphic software from Data Transforms Inc. is not bounded by the traditional limits of screen resolution. Ultra-Res lets you build graphics that are arbitrarily large or complex while viewing as much as your screen or printer will allow.

**PRICE:**

**TITLE: UNIVERSAL GRAPHICS**

**PUBLISHERS NAME: SYMPATHETIC SOFTWARE**

**DESCRIPTION:** A software product which allows you to transform your creations on the Apple Hi Res graphics screen into permanent records on any graphic printer. The program allows for picture cropping and almost unlimited picture magnifications. Pictures may be printed in normal (black on white) or inverse inking. The format is selectable between horizontal and vertical representations. In addition to all these features, a touch of a key will convert the picture into a diamond shape.

There is both an interactive user interface which allows printing of pictures which are in memory or will load them from disk, and a subroutine interface which allows BASIC programs to print the Hi Res screen (or parts of it) directly. When disk loading is selected, only the picture files are displayed in the menu.

The name, Universal Graphics, was selected because the package will support just about any printer or printer interface. Comes on a 13 sector disk. The files are muffleable to 16 sector disk. A fourteen page manual describes how to configure the utility and how to use its features.

**PRICE: \$39.95**

**TITLE: VIDEO MARQUEE**

**PUBLISHERS NAME: CALIFORNIA PACIFIC COMPUTER CO.**

**DESCRIPTION:** VIDEO MARQUEE is a super slide show and billboard combined. Twelve pictures of your own creation (or ours) are shown sequentially without access to the disk after the programs are loaded. Speed is controlled by the paddles from a complete stop to very fast (twelve pictures in tow seconds). Requires 48K with Applesoft in ROM.

**PRICE:**

**TITLE: VIDICHART**

**PUBLISHERS NAME: INTERACTIVE MICROWARE, INC.**

**DESCRIPTION:** A high speed machine language display subsystem enables you to view results as they are collected from an instrument, using any analog to digital converter. Up to four different curves may be shifted left, right, up, or down on the screen and expanded or contracted along the X or Y axis. An on screen report shows the current status of the display, including the scaled coordinates of the graphic cursor. This display subsystem makes it very easy to compare curves or to view the results of other operations outlined below.

At the heart of Vidichart is a complete set of operations for manipulating your raw data. You may print selected values, enter values from the keyboard, load or save data on disk or start collecting data from an instrument. Disk data sets are



compatible with other IMI software, such as Scientific Plotter and Curve Fitter. Utility operations include commands to print the length, maximum and minimum of any one of the four data sets, to move data from one set to another, to zero all or part of a data set or to set the position of a curve on the screen. Numerical operations allow you to add, subtract, multiply, or divide all members of a data set with a constant of another set. You may also integrate, differentiate or compute the moving average of a data set. Special operations permit you to normalize two data sets, visually define a baseline or print the maxima, minima, and peak area for each distinct peak. The results of any operation may be plotted immediately by the display subsystem. You will also appreciate the menu like prompting system which makes Vidichart very easy to learn and convenient to use.

**PRICE: Manual \$ 5.00**

**Disk \$75.00**

**TITLE: VISILIST**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Utility program for financial planners which lists out the grid location and formulas (rather than the calculations) of any file created with VISICALC. This VISICALC companion product has been well received as a tool for analyzing financial models built with VISICALC.

**PRICE: \$24.95**

**TITLE: VISIPILOT DRIVER**

**PUBLISHERS NAME: MICRO PERIPHERALS, INC.**

**DESCRIPTION:** VISIPILOT DRIVER is a program developed to allow the Visiplot program to use the unique capabilities of the MPI graphic printers when generating graphical data on the Apple. Computerized graph plotting is a very useful tool for many business and scientific applications. The usefulness of the graphical displays is greatly extended by the ability to save this data in a visual hardcopy form. The MPI graphical printers make ideal support printers for Visiplot because of the ability to print dot addressable graphic displays in any of four selectable horizontal dot densities.

**PRICE:**

**TITLE: ZOOM**

**PUBLISHERS NAME: SMART WARE**

**DESCRIPTION: Features:**

- \* Print HiRes page 1 or page 2 horizontally or rotated, or print two page panoramas with page 1 above or beside page 2. Print at any feasible scale factor!
- \* Print full or partial screen!
- \* Append our procedures to your program or use our very friendly interactive control programs which feature picture loading from disk, HiRes preview, ZOOM window setting and print format selection.
- \* HiRes preview and save to disk.

**PRICE: \$34.95**

**TITLE: ZOOM GRAFIC**

**PUBLISHERS NAME: PHOENIX SOFTWARE**

**DESCRIPTION:**

-Any area of the Hi Res screen can be printed as large or small as you wish.



- Zoom "Window" feature allows you to frame and see the specific area of the Hi Res screen to be printed.
  - Picture can printed horizontally or vertically.
  - Margins can be completely adjusted for custom placement of picture.
  - Form feed and line feed can be controlled from the keyboard.
  - Prints either Hi Res screen 1 or 2.
  - Prints charts, graphs, or pictures.
  - Menu driven...extremely easy to use.
- PRICE: \$39.95**

## HARD DISK: WHAT ARE THEY AND WHAT DO THEY DO?

CORVUS has developed their Constellation system to enable a large number of computers, of mixed parentage, to use their disc drives. It is essentially a multiplexed network of computers, each group of eight being controlled by a host multiplexer. Eight host multiplexers can be controlled by one other multiplexer. Up to 64 computers can therefore be linked in a system, all of them being pulled in turn, in round robin fashion, for data.

The multiplexers work in conjunction with the Corvus disc system, controlled by the Z-80 processor. The multiplexer controls the information flow to and from the computers in its network, and the Z-80 controls direct memory access to the disc, the multiplexers themselves, and the Mirror Winchester backup system.

A network is basically a means of passing data from one computer to another, onto or off a disc to serve a file, or onto a printer to be printed out. The Constellation achieves this by splitting the data up into finite portions, and feeding them down pipes.

A pipe is a fixed length channel of information with an input and an output end or, to use another term, a FIFO buffer (first-in-first-out) which can be held in an assigned area of the disc and be managed by the controller.

The computer writes data to the input end of the pipe, and it is held there until it is read, is output onto another computer, or is spooled out onto a printer. After the data has been used, the resources allocated to that particular pipe are released to be used by another parcel of information.

Individual computers within the network can send commands to read and write from pipe files, and there can be a maximum of 62 active pipes in the Constellation network at any one time.

Each pipe has a pipe name which can be up to eight characters, and a pipe number from 1 to 62. As each pipe has a unique number, however, several pipes may have the same name.

The major advantage of these pipes is that they are all held in identical format whatever the originating computer. This means that different makes of computer can communicate or access the same data, and printers can be attached to serve the whole range. There is no risk of incompatibility between different operating systems. Indeed, each computer retains its own operating system within a network.

Printers, linked to computers which become dedicated printer servers during printing operations, have data spooled onto them by their computer, searching the pipes to find those which have been called "Printer". When it finds one, it directs the contents of the pipe to the printer, and continues searching the pipes until there are no more to be called. It then continues to make periodic checks to see if any new printer pipes have been created.

Pipes can also be used as a means of creating a mail or message system for the network. Individual computers can search the disc for pipes bearing their identification name, and when one is found can print the contained message on the screen.

As pipes are the means of transporting data to and from the disc system, so the mount table is a means of determining which part of the disc each computer in the network is allowed to access. The Constellation provides each operating system with an I/O driver, which contains a mount table specifying the areas of the disc which the computer is allowed to access.

There are three types of volume on the disc-- a system volume which can be read by all computers but not written to, a personal volume which can be accessed by a specific computer for

both read and write operations, and a shared volume which can be read to or written from by more than one computer.

An obvious corollary to such a flexible and open network is that it must contain a measure of security, or restricted access. Constellation has several means of providing this.

One method is to use access control, and an example of this is the CP/M system, where each computer utilizes a floppy disk drive, the user having to boot the system directly from floppy disc to gain access. This serves as a physical key.

Another method is to allow access by passwords, utilities which modify the mount table. This then increases the level of security from the computer to individual persons. A special file lists who can access which volumes. The only person who can change the privileges of users is the one who acts as system manager.

A further level of security is provided for shared volumes. Where a volume needs to be accessed by more than one operator for both read and write functions there has to be a system for locking out a file while retaining access to other users.

This is done by using semaphores. Any computer can ask to lock a semaphore to limit access, which is normally granted if no other computer is already locked in. This can prevent two computers trying to update a record at the same time.

The speed at which data can be transferred around the network is 60 K bytes per second and the maximum length at which a computer can be located from the multiplexer is 50 feet.

Application packages available on the Constellation system obviously depend on the types of computers within the network. Each computer functions as an independent processor, and the only constraints occur where different computers want to access data from the same shared volume for a particular application.

Where there are a number of common machines, however, it is easy to see which systems provide the greatest benefit.

Word processing systems find such a network extremely useful. All of the stations can share a printer yet retain independent processing power. This is especially relevant where during operation there is a high degree of interchange between the processor and the operator.

For general commercial accounting, the benefits of handling an integrated system on a network are obvious. Different operations can be maintained on different computers, yet all update the same files, such as sales order processing or stock recording. One operation is constantly requiring information from an up to date stock file, while the store clerk stock as it arrives in the warehouse. Information held on file, such as customers credit ratings, can also be accessed by individuals throughout the company whenever necessary.

The advantages of installing networks in schools are obvious, although with the present cutback in resources this is probably something for the future. Using such a system a teacher would be in a position to monitor and control students far more effectively, and course preparation would be simplified.

The Corvus Constellation system is at the cheaper end of the network systems based on the Apple, but it provides a very cost effective and efficient system for the customer who does not want more than about eight computers in a network. Beyond that, the concept of daisy chaining the multiplexers must start degrading the system response and reliability.

Finally, initial reliability problems that Corvus had with their disc systems have been completely ironed out, and they are now the world's largest suppliers of Winchester discs.

#### CLUSTER ONE...LINKS UP TO 64 APPLES

Cluster One is a true network system. Up to 64 Apples can



be linked together, sharing common discs, printers and communications facilities.

At the heart of the system-- although being a modular system it can run without one-- is an Apple which is linked to the disc storage system, and which is called the Network File Server. This system hangs onto a spur from the central 15 wire flat cable. On other spurs hang the remainder of the Apple systems, acting either as work stations or servers to peripherals.

The file server provides two virtual channels for its clients, the work stations. One channel is for manipulating the file system, such as creating, deleting, mounting and unmounting files, and locking shared data during simultaneous updating.

The other channel is used for passing I/O requests and data. As it has a dedicated processor it can handle an enhanced set of I/O facilities. Where the normal operating systems restricts the user to two mounts per channel, the file server allows up to 255 simultaneous mounts in Basic, and six with Pascal.

The file server is also faster than standard local disc drives, allows controlled sharing of data with other work stations, and provides protection of private data.

The system is not a rigid one, to use a beautiful bit of terminology it is topologically unrestrained, and the Apples and peripherals can be laid out in tree structures of daisy chains.

As stated before, there is no central control. Each Apple in the network is either a user or a server. The users are the work stations, and the servers provide services for other users of the network. The server functions available are:

- \* File System
- \* Print spooler
- \* Time of day clock
- \* data base management system
- \* Gateway to other networks
- \* Other specialized hardware

Print servers are normally run without screens, although a screen can be added to allow the Apple to have a dual function and act as a workstation when printing is not required.

Communications servers have access to software to act as emulators, using IBM 2780 and 3780 protocols or as remote Apples to other computers, or as originators of an electronic mail system.

The interface card incorporated into each Apple listens to the network to check whether it is busy or not. If not it sends data in packets up to 255 bytes in length to its chosen destination. Each packet has a recognizable start and end, and cyclic redundancy checks are carried out during transmission. The interface also has the ability to retry and switch itself off after timeout. This type of system is termed packet switching.

The method of handling the data on the disc and through the system involves complex file naming conventions and protection procedures. The file server creates virtual mini diskettes (when DOS is being used) on the central storage system, although this is transparent to the user, who operates as he would do with a stand alone computer.

The system can handle large numbers of virtual mini diskettes in this fashion, or it can allow the user to manipulate the diskettes operating at a local level, where he uses the Apples as a stand alone computer. At Cluster level he involves the network.

Each disc unit is given an assigned name or a unit number, and at the Cluster level on the disc a number of these discs can be held supported by a root directory, sub-directories and Cluster utility programs.

The root directory points directly, or through the sub-directories, to every virtual diskette, utility program, or sub-



directory on that unit. The size of the directory is managed by the file system.

Pathnames are created to identify individual packets of data. These contain unitnames, filepaths, filenames and passwords, and are used to enable data to be held on directory, and transported to individual units or servers. When you want to address a Cluster file on the system, you have to specify by explicit names (or defaults) the physical disc unit (i.e. its root directory), intermediate sub-directories, and the desired Cluster file.

To cut down on the number of characters to be typed when addressing files, a default directory can be set to be accessed automatically.

Security on the system is provided by two different software mechanisms. Cluster file protection is provided by a system of passwords and access rights for different classes of users.

This control access to diskettes, but does not control access to resources which is provided by a system of locks. Locks, acting on a mutual convention, return information to a requesting computer that a particular resource is occupied, and cannot be accessed at the current time.

The operating system to run Cluster One works under Pascal, using the M&R 80 column card as standard. The system can obviously run DOS 3.2 and 3.3, and currently a limited version of CP/M. The system software is held in the network file server.

A major part of the Nestar system however consists of the discs used in the central file store. These are 14 in. Winchester discs with a capacity at the bottom end of 16-1/2 Mb formatted single density and 33 Mb formatted double density. These discs are industry standard and apart from being well tried and tested and in use in many other systems are being operated at the bottom end of their capabilities-- 70Mb and 256 Mb systems are envisioned next year.

The discs are backed up onto a digital tape cartridge which has a capacity of 20 Mb. A 16-1/2 Mb backup will take eight and a half minutes. In addition to this, a clock/calendar card will archive files incrementally, assigning a time and date to each file and only backing up those files not backed up since the last operation.

All networks can obviously run most standard Apple software without modifications. The exception tends to be 5 in. disc based software like Visicalc, where modifications are necessary to allow the program to be loaded onto the Winchester discs. Cluster one works without floppy discs, although there is usually one drive in the system for loading diagnostics and other software.

#### OMNINET...COMPATIBLE WITH CONSTELLATION

Designated a low cost Carrier Sense Multiple Access (CSMA) network, the system is designed around an interface consisting of a Motorola 6801 microprocessor, a custom Omnet gate array and associated support components. The transporter is interfaced directly to the microcomputer in the network and supervises the transfer of variable length records around it.

The transporter requires no software assistance from its microcomputer, its processors being sufficiently intelligent to handle the detection of carrier space on the data highway and to direct its data to the required destination.

The data path is low cost shielded twisted pair cable, instead of costly and bulky coaxial cable. It allows computers to work at distances up to 4,000 feet in a serial link, instead of the 50 ft. maximum of the Constellation network.

The Omnet system is obviously similar in many respects to Cluster One and will be sold at a similar price. It will,

however, link in to the Constellation network its software being fully compatible. It can utilize their piped system of passing data and operate within their security systems.

This is achieved by passing data through a gateway to other networks. This will be the door through which Omninet will be able to link into regional and national networks. As with the Cluster One system, discs are supported through disc servers, and modems and printers require computers with dedicated servers for their operation.

## CORVUS COMPATIBLE SOFTWARE

This directory provides a sampling of the software programs which can be used with the Corvus Winchester Hard Disk Drives. Most of the non-copy protected software written to run under the Apple DOS 3.3 and Apple Pascal operating systems will load easily from a floppy diskette and run on the Corvus Hard Disk. Some software packages that are copy protected, like DB Master, will reside in the floppy drive while utilizing the increased storage capacity and access speed of our hard disk drives in the storage and retrieval of data.

The software packages whose names are followed by three asterisks "\*\*\*" have special hard disk versions available. Many of these hard disk versions often have extra convenience features added to take advantage of the vastly increased access speed and mass storage provided by the Corvus Winchester Hard Disks.

The following software packages listed in this directory have been verified by computer dealers and Corvus Hard Disk users to be Corvus compatible.

### GENERAL ACCOUNTING

The Hardisk Accounting System *** Specially designed accounting system for the Corvus hard disk- includes G/L, A/R, A/P, Inventory, Payroll, Fixed Asset, Mailing Labels. Apple II/Pascal	Great Plains Software 123 15th Street, North Fargo, ND 58102 701-293-8483
--	--

Accounting Plus II *** Accounting package for the Apple II. Includes G/L, A/P, A/R and Inventory with Purchasing. Apple II/DOS 3.3, AppleSoft Basic	Systems Plus, Inc. 1120 San Antonio Rd. Palo Alto, CA 94303 415-969-7047
---	---

Business Accounting Package *** Performs Accounting Functions with a Package of 9 Interactive Modules- G/L, A/R, A/P, Inv. Banking, Dispersements, Payroll, Fixed Assets, Order Processing. Apple II/DOS 3.3, AppleSoft Basic	GOCI 7710 Computer Ave. Suite 115 Edina, MN 55435 612-835-4271
---	--

Flexware *** Integrated accounting system designed to be modified to customer specs. A/R, A/P, G/L, Inventory/Purchasing, Order Process- Payroll, Sales Analysis. Apple II & III/UCSD Pascal, Omni Net	Micro Financial Systems 15404 E. Valley Blvd. Industry, CA 91746 213-961-0237
---	--

Retail Management System *** Interactive A/R, A/P and Payroll 2800 items, no overflow between volumes. AppleSoft Basic/DOS 3.3	Irving Computers 1704 W. Irving Blvd. Irving, TX 75061 214-254-6850
---	--

General Accounting *** General Accounting, A/P and A/R with Accounts Aging. Apple II/Pascal	Status Systems Corp. 2010 Notre Dame Ave. Winnipeg, Canada 204-632-9130
--	--

Broderbund Software Payroll Package  
Up to 300 employees in 65 divisions, can  
establish tax formula for 50 states.  
handles multiple wage, piece, and  
commission rates.  
Apple II/Pascal

Payroll Manager  
Payroll system- 280 employees/volume  
Apple II/DOS 3.3

Accounting Plus \*\*\*  
Accounting Plus is a fully integrated,  
menu driven accounting package  
consisting of eight modules essential  
to running a business.  
CP/M compatible systems.

Tiny Systems Applications  
A/R, A/P, G/L, Inventory, Payroll, Order  
Entry, Job Costing, Time Accounting and  
Sales Analysis for manufacturers' reps.  
Source code available to qualified dealers.  
CP/M compatible systems.

Foresight  
Sales Order System that manages A/R  
inventories and pricing.  
CP/M compatible systems.

#### DATABASE SOFTWARE

DataKeyper \*\*\*  
Data Manager Built for quick and  
simple access to up to 800 data files.  
Apple II/DOS 3.3, Applesoft Basic

DataDex \*\*\*  
Powerful data base for up to 50,000  
record, screen and report formatter  
as well as data entry integrity check.  
Apple II/DOS 3.3, Applesoft Basic

TDM (The Data Machine)  
General Data Management System  
for LargeFiles. Calculates  
Time between Dates.  
Apple II & III/Pascal

DB Master \*\*\*  
Very popular Data Base Built for quick  
and easy access to large amounts of data.  
Apple II/DOS 3.3

The Data Reporter \*\*\*  
General Purpose Database with Report  
Generator and a Plotter/Analyzer for  
Statistical Analysis and the Produc-  
tion of Graphs.  
Apple II/DOS 3.3, Applesoft

Broderbund Software  
1938 Fourth St.  
San Rafael, CA 94901  
415-456-6424

Computer Research  
1879 S. Main St.  
SaltLake City, UT 84115  
801-484-7316

Systems Plus  
1120 San Antonio Rd.  
Palo Alto, CA 94303

Tiny Systems  
6660 N. Glenville Dr.  
Richardson, TX 75081  
214-669-0262

Interactive Compu. Syst.  
6707 Whitestone Rd.  
Baltimore, MD 21207  
301-944-7230

ESP Computer Resources  
9 Ash Street  
Hollis, NH 03049  
603-465-7264

Information Unlimited  
Software, Inc.  
281 Arlington Ave.  
Berkeley, CA 94707  
415-525-9452

Apple II/Pascal  
Systems, Inc.  
830 Menlo Ave, Su 109  
Menlo Park, CA 94025  
415-321-0761

Stoneware, Inc.  
50 Belvedere St.  
San Rafael, CA 94901  
415-454-6500

Synergistic Software  
5221 120th Ave, S.E.  
Bellevue, Wa 98006  
206-226-3216



CCA Data Base Management System \*\*\*  
Simple first time user data base.  
Apple II/DOS 3.3

Versa Form \*\*\*  
Forms Writer for Producing Invoices  
and, Quotations, Purchase Orders and  
other documents.  
Apple II/Pascal

DBASE II  
Full Database functions including the  
ability to define menus and screens -  
for programmers only.  
CP/M compatible systems

FMS-80  
Database Management - user  
definable screens - math functions  
CP/M compatible systems

Data Star  
Forms entry and display system that is  
part of the MicroPro line of software.  
CP/M compatible systems

#### FINANCIAL SOFTWARE

Micro DSS/Finance  
Financial Modeling Package that provides  
Budgeting, Financial Planning, and  
Analysis with Report Generator and  
color Graphics.  
Apple II/Pascal

Desk Top Plan  
Financial Analysis/Modeling Package -  
less interactive than VISIcalc but  
includes a Report Writer.  
Apple III/SOS

SuperCalc  
Electronic Spreadsheet for Planning  
and Forecasting.  
CP/M compatible systems

#### WORD PROCESSING

Executive Secretary \*\*\*  
Professional Word Processor with built  
in index system, mail merge, and  
electronic mail (DB Master compatible).  
Apple II/DOS 3.3

Word Star  
The most popular CP/M word processor  
provides virtually every word processing  
function. Mailmerge capability from  
separate package.  
CP/M compatible systems

Ledgerton Inter.  
23422 Lyons Avenue  
Newhall, CA 91321  
805-254-0556

Applied Software Tech  
15985 Greenwood Road  
Monte Sereno, CA 95030  
408-354-4689

Ashton-Tate  
9929 West Jefferson  
Culver City, CA 90230  
213-204-5570

Systems Plus, Inc.  
1120 San Antonio Rd.  
Palo Alto, CA 94303  
415-969-7047

Micropro International  
1299 Fourth St, Su 400  
San Rafael, CA 94901  
415-457-8990

Addison-Wesley  
Publishing Company  
Jacob Way  
Reading, MA 01867  
617-944-3700

Personal Software  
2895 Zanker Road  
San Jose, CA 95131  
408-946-9000

Sorcum Corporation  
PO Box 32505  
San Jose, CA 95152  
408-727-7634

Sof/Sys, Inc.  
4306 Upton Ave, South  
Minneapolis, MN 55410  
612-929-7104

MicroPro International  
1299 Fourth St, Su 400  
San Rafael, CA 94901  
415-457-8990

Spellguard  
Spelling Checking against a 20,000  
word dictionary.  
CP/M compatible systems (not Lifeboat)

Innovative Software  
Applications Box 2797  
Menlo Park, CA 94025  
415-326-0805

## EDUCATION

STSS \*\*\*  
Student scheduling and tracking system  
supports grade reporting, distributions  
by grade and teacher load  
Apple II/DOS 3.3, Applesoft Basic

Olensky Brothers, Inc.  
3763 Airport Blvd.  
Mobile, AL 36600  
205-344-7447

TheSchoolAttendance System \*\*\*  
A centralized integrated computer  
system designed to keep and report  
attendance on a school wide basis.  
Supports SCAN-TRON Optical Mark Reader  
Apple II/DOS 3.3, Applesoft Basic

EducationalAdmin.  
Data Systems  
2241 Greenbrair Drive  
Springfield, IL 62704  
217-787-7190

CAI-Manager \*\*\*  
Provides central management for  
InstructionalSoftwarewhich can be  
loaded onto hard disk. Unlimited  
Record Storage.  
Apple II/DOS 3.3, Applesoft Basic

Mathware  
919 14'th St.  
HermosaBeach, CA  
90254  
213-379-1570

Classroom Monitor \*\*\*  
Acts as a shared disk interface  
supporting up to 64 Apple Computers  
connected on Corvus Omninet Systems.  
Apple II/DOS 3.3, Applesoft Basic & Pascal

Software Connections  
1800 Wyatt Dr, Su 17  
Santa Clara, CA 95054  
408-988-3704

FASCOM \*\*\*  
Financial Aid Estimator and Management  
System with form letter Word Processing.  
Apple II/DOS 3.3, Applesoft Basic

Financial Analysis  
Service PO Box 1937  
Hiram, Oh 44234  
216-569-3201

Wordsearch  
Creates a wordsearch puzzle after the  
teacher enters a list of words. Answer  
key is printed, also.  
Apple II/DOS 3.3, Applesoft Basic

Hartley Courseware  
Inc., PO Box 431  
Dimondale, MI 48821  
616-942-8987

Clock  
Teaches and drills on time concepts -  
reading a clock - setting the hands, etc.  
Apple II/DOS 3.3, Applesoft Basic

Hartley Courseware  
Inc., PO Box 431  
Dimondale, MI 44821  
616-942-8987

Word Families  
Beginning consonants, ending  
consonants, medial vowels.  
Apple II/DOS 3.3, Applesoft Basic

Hartley Courseware  
Inc., PO Box 431  
Dimondale, MI 48821  
616-942-8987

The Elementary Mathematics  
Classroom Learning System  
To teach Basic Math Skills for  
Whole Numbers or Fractions/Decimals  
Apple II/DOS 3.3, Applesoft Basic

Sterling Swift  
Publishing Co.  
1600 Fortview Road  
Austin, TX 78704  
512-444-7570

## MEDICAL SOFTWARE

Medical Billing Accounts Receivable \*\*\*  
Multi-user, On-Line Superbill, Recall  
Notices, Built-in, Group Incentive  
Plan, Report Queuing for after hours  
Printing, Expandable.  
Apple II/DOS 3.3, Applesoft Basic

P.M.S. Medical Billing System \*\*\*  
A/R system of up to 5 physicians, up  
20,000 accounts, RVS lookup, insurance  
forms, 14 different reports  
Apple II/DOS 3.3, Applesoft Basic

D.O.C.S. \*\*\*  
A/R, G/L and Insurance Claims  
Preformatted insurance forms available  
for many states  
Apple II/DOS 3.3, Applesoft Basic

Medical Practice Management Systems \*\*\*  
A/R for up to 9 doctors, query by name  
or sound, research by procedure or DX,  
management reports by doctor and clinic  
S-100 systems/UCSD Pascal

Physician's Business Application Pkge \*\*\*  
Medical application billing system that  
prints insurance forms, initial and  
monthly statements, up to four insurance  
companies per patient  
Apple II/DOS 3.3, Applesoft Basic

M.O.S. Medical Packages \*\*\*  
Single or multi-user Billing and A/R  
system with insurance forms. Special  
application packages for physicians,  
dentists and psychiatrists.  
Apple II/DOS 3.3, Applesoft Basic

MedPac \*\*\*  
Generates patient and insurance state-  
ments. Ability to suspend transaction for  
patient record look up. Multi-user for  
up to 26 doctors or dentists.  
Apple II/DOS 3.3

Softcare  
Automates Patient Billing,  
Insurance Claims, and  
Accounts Receivable  
Apple II/DOS 3.3

Micro Med  
Billing, multiple insurance forms,  
patient look up, profitability analysis,  
mailing list, appointment book system  
for up to 20 doctors or dentists.  
CP/M compatible systems

Johnson Associates  
Incorporated  
PO Box 1870  
Phoenix, AZ 85001  
602-979-4554

Professional Medical  
Systems, Incorporated  
3604 Foothill Blvd.  
La Crescenta, CA 91214  
213-248-2411

Doctor's Office  
Computer Systems  
2501 Williamson Rd.  
Roanoke, VA 24102  
703-366-5200

Professional Software  
Associates  
N 9515 Div. Suite 1  
Spokane, WA 99218  
509446-0396

HMS Systems, Inc.  
PO Box 4633, SFA  
Nacogdoches, TX 75962  
714-560-1504

Medical Office  
Systems, Incorporated  
205 N. Frederick  
Gaithersburg, MD 20760  
301-840-0440

Med-data  
108 Allen Rd.  
N.E. Suite 210  
Atlanta, GA 30328  
404-252-6681

Professional Business  
Syst, 119 Fremont St.  
San Francisco, CA  
94901  
415-546-1596

Software Hows  
PO Box 36275  
Los Angeles, CA  
90036  
213-829-6782

Veterinary Billing  
Accounts Receivable  
Multi-user, Recall Notices, Report  
Queing for after Hours Printing,  
Data Diagnostics.  
Apple II/DOS 3.3, Applesoft Basic

VMS-Veterinary Management System  
Complete Package including Billing,  
Recall reminders, Tracing of Drugs  
Administered, Profit Analysis by  
Procedure.  
CP/M compatible systems

Dental Lab IV  
On Line Case Entry, Work Orders,  
Invoices, Inquiry  
CP/M compatible systems

Dental Practice Management Systems \*\*\*  
A/R for up to 9 dentists, query by name  
or sound, research by procedure or DX,  
management reports by doctor and clinic  
Dispersements, Payroll, Fixed Assets,  
Order Processing.  
Apple II/DOS 3.3, Applesoft Basic

#### MISCELLANEOUS

Synopsis \*\*\*  
Reads and Maintains a catalogue of the  
first four lines of all files on the  
disk. Almost a necessity for word  
processing Corvus Disk Systems.  
CP/M compatible systems

Computer Card Catalog (Library) \*\*\*  
Computerized Substitute for Card  
Catalog, Patron can Search for a Book  
by Subject, Author, or Title, with a  
Response Time of Less than 3 seconds.  
Apple II/Basic

Cacade II \*\*\*  
Industrial quality Computer aided  
drafting and design system for electrical  
architectural, mechanical and process  
industries. 68000 co-processor available  
Apple II/Pascal

LETS \*\*\*  
Provides an interactive graphics dialogue  
to plan and estimate computer aided  
manufacturing for machine shops.  
Apple II/Pascal

Retail Sales System \*\*\*  
Complete Point of Sale system including  
cash drawer, invoices, sales reports, and  
inventory module. Interfaces with TCS  
accounting system.  
CP/M compatible systems

Johnson Assoc. Inc.  
PO Box 1870  
Phoenix, AZ 85001  
602-979-4554

Innovative Business  
Software  
710 Williams  
Richardson, TX  
214-699-9088

Compusol, Inc.  
5455 Ruford Hwy  
N Court Square B223  
Dorabille, GA 30340  
404-451-1033

Professional Software  
Associates  
North 9515 Div. Su 1  
Spokane, WA 99218  
509-446-0396

Pro/Tem  
814 Tolman Drive  
Stanford, CA 94305  
415-497-3573

Computer CAT  
3005 West 74th Avenue  
Westminster, CO 80030  
303-426-5880

Cascade Graphics  
Development  
1000 S. Grand  
Santa Ana, CA 92705  
714-558-3318

Tipnis Associates  
PO Box 42001  
Cincinnati, OH 45242  
513-791-3805

Xtra Soft, Inc.  
PO Box 91063  
Louisville, KY 40291  
502-499-1533



### Flexware \*\*\*

Table driven program generator and maintenance fascility for the creation of custom and vertical market software. Integrated database and report writer with data dictionary. Multi-user with record lock out.

Apple II & III/UCSD Pascal

### Milestone

Project Management/Scheduling -  
a PERT Chart Maker  
CP/M compatible systems

### SMART

Analysis and graphics of stocks, options commodities, bonds, and related market economic indexes. Automatic securities update and portfolio monitoring available.  
Apple II/DOS 3.3, Applesoft Basic

### Analyst/Advisor

Stock and bond portfolio charting and management system. Command driven like word processor. Automatic updates.  
CP/M compatible systems

### Commodities Package

Software for the Stock and Commodities Trader, Numerous Technical Analysis Program, Complete Editing and Bookeeping Functions

### Statpro

Sophisticated statistical analysis and plotting package. Reads DIF and ASCII files for integration with databases. Works with OMNINET.  
Apple II & III/UCSD Pascal

### CIS COBOL

Acompiler for COBOL - the most popular mainframe and minicomputer business computer language.  
CP/M compatible systems

### Stiom-Finite Element

#### Structural Analysis \*\*\*

Analyses Stress and Displacement in Building Structures - on any other design work where a body frame is subject to stress.  
CP/M compatible

Micro Financial Syst.  
15404 E. Valley Blvd.  
Industry, CA 91746  
213-961-0237

Organic Software  
1492 Windsor Way  
Livermore, CA 94550  
415-455-4034

Software Res., Inc.  
186 Alewife Brook  
Suite 310  
Cambridge, MA 02138  
617-497-5900

Kate's Komputers  
Distributing Corp.  
PO Box 927  
415-332-9434

Computrac/Technical  
Analysis Group  
PO Box 15951  
New Orleans, LA 70175  
800-535-7990

Blue Lakes Software  
3240 W. University Ave  
Madison, WI 53705  
608-233-6502

Micro Focus  
1601 Civic Center Dr.  
Santa Clara, CA 95050  
408-496-0176

McClintock Corp  
Box 430980  
Miami, FL 33143  
305-666-1300

## TECHNICAL NOTES ON CORVUS SOFTWARE COMPATIBILITY

Most non-copy protected software runs on the Corvus Hard Disk Drive. There are a few exceptions and rules of thumb that have been compiled are listed below by operating system.

### CP/M

Virtually all software written to run under the CP/M operating system will run without problems on the Corvus Hard Disk Drive. The only CP/M software found to require modification are old (pre CP/M 1.4) utilities and language compilers that have built in limitations that prevent access to files greater than 500 K or require loading at a specific address on top of the operating system and thus destroying the Corvus patch to CP/M.

### APPLE DOS 3.3 AND PASCAL

Three types of problems with Corvus software compatibility under Apple DOS 3.3 have come to light.

1. Software compatibility problems stem mostly from the addition of 80-column cards, communication cards, memory boards, interface cards and any of the large number of printed circuit cards available to plug into the slots inside the Apple computer. Some of these cards have been found to compete with our Corvus Hard Disk interface card for the same few memory spaces in low memory not used by the operating system. More information on specific cards which interfere with the Corvus interface will be available in the next edition of the CORVUS SYSTEMS SOFTWARE DIRECTORY.

2. Software designed to access multiple floppy diskettes may not work if the developer did not take into account the Corvus simulation of floppy diskettes through volume numbers.

3. There are a few software packages that require booting from a diskette in slot #6 (where the Corvus interface card must reside). Switching the diskette and Corvus Hard Disk interface cards is both bothersome and risks damage to the computer and the cards should one forget to turn off the Computer before switching the cards. There are two very good accessory cards designed to alleviate this problem.

1. The Johnson SLOTSWAPPERS available from Johnson Associates will swap slot #6 with any other slot with the flick of a toggle switch.
2. The SLOT SWAPPER JG 4X6 from Microbyte swaps slots 4 and 6 in software via a poke command.

Johnson Associates  
6525 W. Villa Theresa  
Glendale, AZ 85308  
602-979-4554

Microbyte  
Nazas 10-2  
Col. Cuahatemog  
Mexico City, Mexico 06400  
905-591-0321

### Apple II and Apple II Pascal

Virtually all software written in Pascal 1.0 and 1.1 for the Apple II and Apple III works on Corvus Hard Disk Drives.

### Apple III SOS

Virtually all software written to run under the SOS operating system for the Apple III will run without problems on the Corvus Hard Disk Drive.

# MAILING LIST

APPLE A.I.M. . . . .	ML-1
APPLE POST . . . . .	ML-1
APPLE SACK 5- MAIL SACK . . . . .	ML-1
COMMERCIAL MAILER . . . . .	ML-1
CUSTOMER INFORMATION SYSTEM . . . . .	ML-1
DISK MAILING LIST . . . . .	ML-2
EASYMAILER . . . . .	ML-2
LABEL MAKER . . . . .	ML-2
MAGIC MAILER . . . . .	ML-2
MAIL EXPRESS . . . . .	ML-3
MAIL LIST . . . . .	ML-3
MAIL LIST PACKAGE . . . . .	ML-3
MAIL LIST SYSTEM . . . . .	ML-4
MAIL POWER . . . . .	ML-4
MAIL/PHONE LIST . . . . .	ML-4
MAILER . . . . .	ML-4
MAILING LIST . . . . .	ML-5
MAILING LIST DATABASE . . . . .	ML-5
MAILING LIST PROGRAM . . . . .	ML-6
MAILMASTER . . . . .	ML-6
MAILMASTER ZIP SORT OPTION . . . . .	ML-6
MAILROOM . . . . .	ML-6
MASTER MAILING LIST . . . . .	ML-6
MEGA-MAIL . . . . .	ML-7
MICRO GIANT MAIL LIST . . . . .	ML-7
THE ADDRESS BOOK . . . . .	ML-8
THE MAILING LABEL AND FILING SYSTEM . . . . .	ML-8
THE MAILING LABEL AND FILING SYSTEM ADJUNCT . . . . .	ML-8
THE MAILING LABEL AND FILING SYSTEM SUPPLEMENT . . . . .	ML-9
THE MAILROOM . . . . .	ML-9



**TITLE: APPLE A.I.M.**

**PUBLISHERS NAME: NIBBLE**

**HARDWARE REQUIREMENTS: Serial or Parallel printer**

**DESCRIPTION:** A highly modular system for managing Mail Lists and other Filing/Listing Applications. Define up to 32 different Fields of Data. Rearrange and Select for Label/List formatting. Includes options for Formatting, Adding, Deleting, Editing, Finding, Sorting, and Printing the stored Records.

**PRICE: \$28.95**

**TITLE: APPLE POST**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**HARDWARE REQUIREMENTS: 2-6 Disk Drives, Printer 11A (Centronics 779 Tractor/Controller)**

**DESCRIPTION:** APPLEPOST is a data base system that handles the creation and maintenance of mailing lists of up to 500 names, addresses, and phone numbers, and can print lists or actual labels in order by name or zip code. APPLEPOST makes it possible to locate names and phone numbers quickly, and uses a unique "phonetic search" feature to locate names even when correct spelling is not known. The mailing list system is packaged including a manual and program diskette.

**PRICE: \$49.95**

**TITLE: APPLE SACK 5- MAIL SACK**

**PUBLISHERS NAME: COMPUTERMART**

**DESCRIPTION:** Mail List program--you can put 1000 names and addresses on this disk. Fields include: last, first, firm, address, city, state, and zip. You can sort in any one or combination of the 7 fields. You can set the print format any way you desire, 2 sample printouts are included for labels and printout list.

**PRICE: \$24.95**

**TITLE: COMMERCIAL MAILER**

**PUBLISHERS NAME: STONEHENGE COMPUTER COMPANY**

**DESCRIPTION:** COMMERCIAL MAILER has an incredible capacity of 30,000 names per mailing list. Written in Applesoft for the APPLES/Corvus system, it can handle an unlimited number of lists, each with a 30,000 capacity for a 6 line record, which is fully adaptable to your format. Written by Mike Mahoney, the program is menu driven, with features such as create list, select, display, report, maintain by zip or alphabetical order, finds entry, browses, changes, adds, deletes, searches, and has utility/code field. Lists can be located anywhere on a disk, and the system can produce 1UP, 2UP, 3UP, or 4UP Cheshire or pressure sensitive labels. Additionally, it is fully prompting, easy to run, and comes with a detailed user manual. Required is a 48K APPLE, 80 or 132 column printer, the Corvus 11AP Hard Disk. Optional is the Corvus Mirror and Constellation. Stonehenge is now making this program available for \$250.00 plus \$3.00 shipping. Additional information is available with a request on your company letterhead.

**PRICE: \$250.00 + \$3.00 shipping**

**TITLE: CUSTOMER INFORMATION SYSTEM**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Allows you to compile and maintain your own mailing list. Names can be added, changed, or deleted at any time. The names can be sorted by different fields and can be printed in



list format, or directly in mailing label format. Includes 3 sets (600 names). Additional sets (200 names) also available.  
**PRICE: \$175.00**

**TITLE: DISK MAILING LIST**

**PUBLISHERS NAME: CRITERION SYSTEMS GAMES**

**DESCRIPTION:** A mailing list program with all essential features. The following commands are supported: Add Records, Search for Record, Print File (auto or manual), Back-up File and Sort. A record can be changed or deleted once it is found (by the Search Command). The program will search for all occurrences of the same last name in the file. Program runs as received with either serial of Apple parallel interface-source code for the program is included. Provision is made for adjusting the number of lines skipped between labels, and for automatically printing additional copies of the mailing list. Since the entire data base is kept on disk, the number of records is limited only by the capacity of the disk.

**PRICE: \$25.00**

**TITLE: EASYMAILER**

**PUBLISHERS NAME: INFORMATION UNLIMITED SOFTWARE**

**DESCRIPTION:** With EasyMailer, your Original EasyWriter word processing system can be used to create individualized form letters. Use EasyMailer to enter the names, address and key information. You can then load an EasyWriter file and EasyMailer will send out an individualized letter to everyone on your list. You can define key field so that EasyMailer can select the people to whom you want the letter addressed. EasyMailer will type the name, address and other key words into the form letter. EasyMailer can be used to address individual envelopes or produce mailing labels.

**PRICE: \$69.95**

**TITLE: LABEL MAKER**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** Users can quickly create address labels. A given label may be generated in any quantity from 1 to 32767. Space is allowed on labels for personal and company name, but the space is automatically closed up if only a personal name is entered. Space for foreign countries is also allowed. The program can also generate labels for price-tags, part numbers and mail-messages such as "RUSH", "FRAGILE", etc. A self-incrementing feature allows theater-tickets to be produced, with a date, and numbers running from A000 to Z999. An editor is provided for editing labels prior to printing. All labels may be saved to disk for instant recall.

**PRICE: \$35.00**

**TITLE: MAGIC MAILER**

**PUBLISHERS NAME: ARTSCI**

**DESCRIPTION:** ARTSCI's MAGIC MAILER is a mailing list merge system designed to take MAGIC WINDOW document files and replace names, addresses, or any other section of the document with individual data- thus creating customized letters, invoices, labels or reminders.

MAGIC MAILER uses the same streamlined menu system utilized by MAGIC WINDOW and MAGIC WORDS. These three systems used together form the most complete and professional word processing mailing system on the market today. There is no limit to the amount of

work they can save you.

For example: compose and edit a document on MAGIC WINDOW, correct it with MAGIC WORDS, and then file it. Build an extensive and complete mailing list for MAGIC MAILER's use, merge the two systems and instantly print an unlimited number of personal documents with individual data inserted wherever you've specified it. Send out letters that will be read instead of tossed!

MAGIC MAILER will replace information anywhere in a document, insert it within a paragraph, and then rejustify that line if required. Dollar values can be automatically justified to the right or centered on request.

MAGIC MAILER contains the most powerful data selection commands ever created for the Apple II. These commands automatically sort through thousands of records and select only the data you need.

MAGIC MAILER will operate using standard Apple sequential text files. MAGIC WINDOW, or any data base that creates these text files, can also be used.

Additionally, MAGIC MAILER will print envelopes, mailing labels, phone lists, invoices and thousands of other documents with minimal keystrokes.

**PRICE: \$69.95**

**TITLE: MAIL EXPRESS**

**PUBLISHERS NAME: LOGICAL SOFTWARE**

**DESCRIPTION:** A utility that can be used by companies or individuals to store the Name, Address, Telephone number of clients or friends.

Provides User Definable Codes for City, State and Zip. These codes shorten the time required by you to type in names to your mailing list and save room on the disk.

- \* Prints Return Addresses
- \* Store up to 2,200 names per disk
- \* Sort a file in 30 seconds
- \* Machine Language Find Routine will search for any information included in the file in seconds

**PRICE: \$49.95**

**TITLE: MAIL LIST**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** This package provides full capabilities for entering, updating, removing, sorting and printing mail list data. You define the names and contents of each field of data (up to 10 per entry), and print out only the fields you specify. You can sort on any field (name, zip code, etc.)

**PRICE: \$29.95**

**TITLE: MAIL LIST PACKAGE**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** The MAIL LIST PACKAGE, written in Apple's Integer Basic, will store your mailing list on diskette for easy access. And you may have as many separate mailing lists as you desire. You may list all OR part of you mail list in chronological order OR sorted by any of the fields named below.

You may obtain a page listing of mailing records OR you may print mailing labels OR you may get a telephone listing.

You may search the mail list file by person's name or company name.

**EASY-TO-USE:** All programs provide clear, readable, easy-to-use screen formatting. And the MENU of programs allows you to merely enter a number to select the program you want to use.

**FEATURES:** You may store up to 700 records on an otherwise empty diskette.

Each mail list record contains the following:

Field Name	Characters
CATEGORY	3
PERSON'S NAME	30
COMPANY NAME	30
ADDRESS	30
CITY	21
STATE	2
ZIP	5
TELEPHONE #	12

**CATEGORY field** - You may subdivide your mailing list by using this field. When you ask for a listing of your mail list or for mailing labels or phone list, you will be asked whether you would like to have a listing of the entire file or only one CATEGORY.

**TELEPHONE field** - This field may be used for other purposes if you wish. Since you may sort by the telephone field, it may be useful as a descriptor. Or you may want to use it as a comments fields.

**STATE field** - One program in the package provides you with a handy listing of all two-letter state abbreviations.

**PRICE: \$40.00**

**TITLE: MAIL LIST SYSTEM**

**PUBLISHERS NAME: EASTERN HOUSE SOFTWARE**

**DESCRIPTION:** Requires 48K Apple, disk, Applesoft in ROM. Sorts on zip code or last name. Approximately 1000 names/diskette.

**PRICE: \$34.95**

**TITLE: MAIL POWER**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION:** MAIL POWER is Mailing Management System that makes Form Letter Processing a reality when used with TEXT POWER. In addition, MAIL POWER is the only mailing system available with full upper and lower case capability. The major features of MAIL POWER include: Dan Paymar Lower Case Adapter Compatibility; Form Letter Processing When Used with Text Power; Inserts Date, Address, or Salutation Anywhere in Letter When Used With Text Power; Complete Search and List Functions; Directly Links with Another Super Fast Sort Routine; Four-way Data Output Capability. MAIL POWER is an excellent Mailing Management System and includes over 20 pages of comprehensive documentation.

**PRICE: \$34.95**

**TITLE: MAIL/PHONE LIST**

**PUBLISHERS NAME: GOLWAY COMPUTER ENTERPRISES**

**DESCRIPTION:** Generates a phone/mail list with labels. One can specify which names are to be printed, or not printed, i.e. if you want labels beginning with a G, or names with certain zip codes, with this program it is done with ease. You can also print all your names out, with automatic sorting by zip code, to take advantage of bulk mailing discounts.

**PRICE: \$49.95**

**TITLE: MAILER**

**PUBLISHERS NAME: PCD SYSTEMS**

**DESCRIPTION:** A mailing list program written in UCSD Pascal which is suitable for a variety of applications. Since the source



version of the program is included it is possible to expand or alter the program to suit your own specific needs. Address labels can be printed in any desired order including alphabetically, by zip code or by state. It is possible to select a given set of address for printing according to user defined categories. It is possible to see the disk directory without leaving the program.

**PRICE:**

**TITLE: MAILING LIST**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION:** A very versatile program for printing address labels for mailing lists is Mailing List. The program has many features including; alphanumeric sort on any field, vertical spacing adjustment, search any field any print labels, printer interrupt for label adjustment, and much more. This is the same program used by Systems Design Lab.

**PRICE: \$29.95**

**TITLE: MAILING LIST DATABASE**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** This new, user oriented mailing list program introduces professional quality and speed to the processing of name and address files. The self prompting features speed to the processing of name and address files. The self prompting features of Mailing List Database aid the user in creating and maintaining address files. Labels or printed lists can be readily produced at any time.

**SINGLE KEYSTROKE COMMANDS** - Any record can be displayed, edited, deleted or printed with just a few keystrokes. Updates and additions have never been faster or easier. The program uses fast binary rather than the slower text files.

**CONVENIENT DATA ENTRY** - all required inputs are prompted by the program. Recurring information and default names and numbers can be entered with a single keystroke.

**MACHINE LANGUAGE SEARCHES** - Any record in a given file can be found in less than one second by specifying part or all of 1 or 2 fields. All files on one or two disks can be searched with a single command.

**MACHINE LANGUAGE SORTS** - All records can be sorted by any field or combination of any 2 or 3 fields. Sorting 200 records, comparing 50 characters takes less than a minute. After sorting, files can be saved, printed, or displayed. A separate sort/merge utility is provided for sorting an entire disk of records.

**MULTIPLE RECORD FORMATS** - Three separate formatting options are available to meet different user requirements. These format options can accommodate 9 digit zip codes, foreign mailing requirements, multiple names, company names, 2 line street addresses, etc.

**LARGE CAPACITY** - Up to 1700 records on 2 disks can be accessed in seconds. A single print command will print all records on both disks or only those matching 1 or 2 search keys.

**FLEXIBLE APPLICATION** - The program can be adapted to numerous commercial and personal uses. Current suppliers, customers, clients, patients, members, even Christmas card lists can be kept on individual, updated files at all times.

Mailing List Database is supplied on disk and comes with a program for automatically converting existing text mailing list files.

**PRICE: \$40.00**



**TITLE: MAILING LIST PROGRAM****PUBLISHERS NAME: SOFTWARE TECHNOLOGY FOR COMPUTERS**

**DESCRIPTION:** Prints labels and/or listings with phone numbers sorted or searched by 6 fields. Holds up to 800 records on a single data disk. Data fields include acct. no., first name, last name (company), address #1, address #2, attention, city, state, zip (10 digits) and phone number (12 digits). On-screen editing, view and delete routine provided. Company name on first line. Line up and variable spacing routine. Error protection devices provided. Prints phone listing sorted by last name. Fast machine sort and search. Program disk and instruction manual.

**PRICE: \$50.00**

**TITLE: MAILMASTER****PUBLISHERS NAME: ADS**

**DESCRIPTION:** As many as five hundred mailing list entries per disk, labels of any width and length, full editing with global search, and selective printing of labels allowed.

**PRICE: \$69.95**

**TITLE: MAILMASTER ZIP SORT OPTION****PUBLISHERS NAME: EXECUTIVE DATA SYSTEMS, INC.**

**DESCRIPTION:** An optional package is available to enable you to zip sort your mail list files. Even large mail lists, spread over multiple diskettes, can be zip sorted using this package. After the files are sorted all of the selection and print options available in MAILMASTER can be applied to the zip sorted files. Addition of this zip sort option to your MAILMASTER mail list system gives true commercial mail list maintenance capability to business and professional organizations. This package has been used repeatedly to zip sort a twelve-thousand CP/M system with two floppy disk drives having a storage capacity of about 950 kilobytes each.

Minimum requirements for the zip sort option are the same as for MAILMASTER. However, larger diskette storage capacity means fewer steps are required to sort large files. A hard disk is unnecessary but will significantly increase the speed and efficiency of zip sorting.

The MAILMASTER zip sort option package is sold only to registered purchasers of MAILMASTER and it will only work with the files created by MAILMASTER.

**PRICE:**

**TITLE: MAILROOM****PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The MailRoom is a complete mailing list management system suitable for such major mailing operations as sending out newsletters or keeping track of club membership. The system allows the entry of names to the list (including full upper and lower case characters), the coding of the list, the storage onto the disc, the recalling of the list from disc, the cataloging of the number or current lists, and editing of portions of the list, and the sorting of the list in alphabetical or numerical order. The list includes provision for a four line address plus two user code fields which may be printed or used in sorting operations.

**PRICE: \$89.95**

**TITLE: MASTER MAILING LIST****PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**ML-6**

**DESCRIPTION:** Designed for the professional office that does heavy mailing. The program can be used for most commercially available labels. Lines are used for 1 (name, 2(Company, 3(Street Address, 4(City, state and ZIP, and 5, (Various user defined codes.)

**PRICE: \$90.00**

**TITLE: MEGA-MAIL**

**PUBLISHERS NAME: SIR-TECH SOFTWARE, INC.**

**DESCRIPTION:** Lets you categorize and catalog your mailing list down to the last possible detail, allowing you to target mailings to precisely who you want to.

Say you want to send a letter to all prompt-paying distributors of your major line who have responded to previous mailings and who are based in 5 midwest states. MEGA-MAIL will do it at the touch of a button.

Say you want to send a letter out to all the tardy accounts. Not only will MEGA-MAIL do it at the touch of a button, but it will tell you how to bundle the envelopes so that you can take advantage of the bulk mailing rates efficiently.

MEGA-MAIL lets you quickly add, edit, delete, and scan your mailing lists, split your mailing list over multiple disks or keep it on a hard disk. Take advantage of savings if you use ZIP PLUS 4, and automatically convert your mailing list as the information becomes available, print out reports or labels targeting exactly the right subgroup of your mailing list. Organize the mailing list in the way most comfortable to you.

By using sophisticated new "RAMCARD" as temporary storage devices, MEGA-MAIL runs up to 10 times faster than even a hard disk.

**PRICE:**

**TITLE: MICRO GIANT MAIL LIST**

**PUBLISHERS NAME: PRO BIKE, INC.**

**DESCRIPTION:**

**Program Features:**

- Large Capacity: 10,000 Names and Addresses
- Zip sorted for bulk mail: Save Money on Postage
- High performance: Fast entry, Fast Printout
- Many special features

This program will maintain a zip-sorted mailing list for over 10,000 names. Provision is made for rapid and convenient entry of the names and addresses. Over 200 new entries per hour can be made. Changes and deletions can be rapidly made and new address labels can be printed automatically when address corrections are made. Extensive prompting and error control routines reduce training to a minimum and prevent entry of the most common errors. Provision is made for designation of special categories, so that mailing labels may be printed for a specific target group within the mailing list.

Rapid print-out is an outstanding feature of the MICRO Giant Mail List. Using a Paper Tiger 440 printer, the alphabetic print-out is made at a rate of over 3,000 names and addresses per hour. Address labels print at a rate of about 2,000 per hour. The printing speed may be faster or slower depending on the printer and interface used.

The MICRO GIANT MAIL LIST is very flexible. The system may be configured for any desired label width and any number of labels across. The address labels can include any or all zip codes, so that if printing is interrupted, printing can resume at any zip code. The alphabetic print out may begin and end with any letter of the alphabet.

Additional features and operational details are discussed in the sections which deal with the individual menu selections.

**PRICE: \$100.00**

**TITLE: THE ADDRESS BOOK**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Stores addresses, names and telephone numbers on disk, and prints mailing labels. With a Hayes Micromodem, the Address Book is also an automatic telephone dialer.

Store 700 names and addresses on each data disk, then sort the file in any order. System enables you to classify or group records for selective viewing or printing by user definable category.

**PRICE: \$49.95**

**TITLE: THE MAILING LABEL AND FILING SYSTEM**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** This disk and its programs are as dynamic as your own imagination. Features of this unique system are:

- \* A special user-inputted formatting that determines the length and content of the records in your file. You decide at the outset what information you want your files to contain.
- \* Binary sorting allows access of any record by name in 1-2 seconds.
- \* An alphabetical directory that enables the user to locate business names or names of people and their record numbers quickly and easily. You may start your directory-reading with any letter of the alphabet. You may also read this directory in reverse.
- \* Special mailing label practice program is included.
- \* Options to print them out or just read any information that is accessed.
- \* A special COUNT/SORT feature that enables the user to pull a certain type of population out of his/her file and display these records, print them out, or make mailing labels of them.

**PRICE: \$34.95**

**TITLE: THE MAILING LABEL AND FILING SYSTEM ADJUNCT**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** You can do the following with this adjunct to the original system:

- \* Do character/code (partial field) count/sort with up to 52 individually keyable codes. This option is available on all 5 data-retrieval programs on the disk.
- \* Do a double count/sort on a file so you're sorting the subfile after you do the initial sort...the uses of this powerful tool are explained with examples.
- \* Print out count/sorted labels (you may enter dozens of variables and values to check for) in alphabetical or zip code order.
- \* Do practice label routine.
- \* Print out formatted address lists whose entries have been count/sorted.
- \* Update, read, or insert new records into either or both of those directories.
- \* Create either an alphabetical or zip-code-ordered directory, or both, for your records.

**PRICE: \$24.95**

**TITLE: THE MAILING LABEL AND FILING SYSTEM SUPPLEMENT**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** These are all features of this 2-disk supplementary system:

- \* Print out labels for some or all of your file records in alphabetical or zip code order.
- \* Do a double count/sort on a file so you're sorting the subfile after you do the initial sort...the uses of this powerful tool are explained with examples.
- \* Print out 80-column formatted address lists, with phone numbers (you input printer control characters)
- \* Do practice label routine.
- \* Update, read, or insert new records into either or both those directories.
- \* Print out 80-column formatted name and phone number lists (you input printer control characters).
- \* Print out count/sorted labels (you may enter dozens of variables and values to check for) in alphabetical or zip code order.
- \* Print out formatted phone lists whose entries have been Count/sorted.
- \* Create either an alphabetical or zip-code-ordered directory, or both for your records.

**PRICE: \$34.95**

**TITLE: THE MAILROOM**

**PUBLISHERS NAME: CONTINENTAL SOFTWARE**

**DESCRIPTION:** Stores up to 750 names per disk. Prints master lists and labels 1,2 or 3 across. Sorts in 5 seconds. Sort on any of 12 items, search any sorted item in 10-20 seconds.

**PRICE: \$34.95**



# MATHEMATICS

10 LESSONS IN ALGEBRA	M-1
3-D SURFACE PLOTTERS	M-1
A-STAT 79	M-2
ADVANCED MATHEMATICAL ROUTINES	M-2
AIDA: APPLE INTERACTIVE DATA ANALYSIS	M-3
ANOVA	M-3
ANOVA II	M-3
BIOBITS VIII: ANALYTICS	M-4
COMPLEX MATHEMATICS	M-4
CONDUIT	M-5
CURVE	M-5
CURVE FITTER	M-6
DATA SMOOTHER	M-6
DATA SYSTEM	M-6
DB MASTER STAT PAK	M-7
DESCRIPTIVE STATISTICS & REGRESSION ANALYSIS	M-7
DESK CALCULATOR II	M-7
DOUBLE PRECISION FLOATING POINT FOR APPLESOFT (TM)	M-7
EASI/ARIMA	M-8
ELEMENTARY ARITHMETIC EDU-DISK	M-8
ELF STATISTICAL PACKAGE	M-9
EXPLORATORY DATA ANALYSIS	M-10
FUNCTION PLOTTER	M-11
GENERAL MATHEMATICS-1	M-11
HSD ANOVA	M-11
HSD REGRESS/MULTIPLE REGRESSION PROGRAM	M-12
HSD STATS	M-12
INTRODUCTION TO PSYCHOLOGICAL STATISTICS	M-13
LAB STATISTICS PACKAGE	M-13
LINEAR PROGRAMMING	M-13
LINEAR REGRESSION	M-13
MICRO TSP VERSION 3.1	M-14
MULTIPLE REGRESSION ANALYSIS	M-14
NUMERICAL ANALYSIS	M-14
REGRESS	M-14
REGRESSION 1	M-14
REGRESSION II (PARAFIT)	M-15
SOFTWARE PAC #3	M-15
STATISTICAL ANALYSIS	M-15
STATISTICAL ANALYSIS GROUP	M-16
STATISTICS	M-16
STATISTICS (BIO) II	M-16
STATISTICS PAC	M-16
STATISTICS PACKAGE	M-17
STATISTICS WITH DAISY	M-17
STATPRO (MAINFRAME STATISTICS ON AN APPLE)	M-18
STATS	M-18
STEPWISE MULTIPLE REGRESSION	M-19
TRIG/CIRCLE TANGENT	M-19
TWG/ARIMA	

**TITLE: 10 LESSONS IN ALGEBRA**

**PUBLISHERS NAME: GEORGE EARL**

**DESCRIPTION: SETS AND SUBSETS -- RATIONAL NUMBERS -- REAL NUMBERS  
-- SENTENCES -- SIGNS -- FRACTIONS -- MULTIPLICATION -- EQUATIONS  
-- INEQUALITIES -- POLYNOMIALS**

**PRICE: \$24.95**

**TITLE: 3-D SURFACE PLOTTERS**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION: Explore the ELEGANCE and BEAUTY of MATHEMATICS by creating HI-RES PLOTS of 3-dimensional surfaces from any 3-variable equation. Disk save and recall routines for plots. Menu driven to vary surface parameters. Hidden line or transparent plotting.**

**PRICE: \$19.95**

**TITLE: A-STAT 79**

**PUBLISHERS NAME: ROSEN GRANDON ASSOCIATES**

**DESCRIPTION: A general purpose statistical package for the Apple II microcomputer, is a subset language of the mainframe package P-Stat 78. Data is processed from DOS files, increasing the capacity of the system to as many as 45 variables for each of 2000 cases (one disk full of data). Statistical procedures currently implemented include:**

- \* **CORRELATE** for the creation of square correlation matrices (standard deviations, means, Pearson-product-moment correlations and Good N). Up to 15 by 15 matrices can be constructed with a 32K system.
- \* **FREQ** for frequency distributions (counts, percents and cumulative percents).
- \* **DATA** for file definition and descriptive statistics (Good N, sum, mean, standard deviation, minimum and maximum).
- \* **TABLES** for bivariate frequency distributions (cell counts, row percent, column percent, total percents, expected values, cell Chi-squares, overall Chi-Square and exact probability of Chi-squares) + 14 other measures of Bivariate association
- \* **DIF** interface
- \* **JOIN** for the merging of data files (up-down and left-right)
- \* **List** for the formatted displaying of files and report generation
- \* **Sort**
- \* **Apple Plot Interface**
- \* **NO.OP** for permanent file modification, variable transformations and descriptive statistics
- \* **PATHS** for multiple regression and path analysis of linear combinations of variables (simple correlations, standardized regression weights-Beta's, non-standard regressions weights and intercept, standard error of regression weights, exact significance level of regression weights, multiple correlation coefficient, R-Square, R-Square adjusted for shrinkage, standard error of estimate, analysis of variance table with sums of squares for regressions and error, the F-test for the equation and the exact probability of F and residuals)

**A-STAT's variable transformation language is available by each major procedure. Variables may be combined using ordinary arithmetic, case delta, sine, cosine, log, and random numbers. Arithmetic can be based on outcome of logical expressions. All procedures account for missing values and understand weight variables.**

**PRICE: \$145.00 for complete system and one manual  
\$ 10.00 for each additional manual**

**TITLE: ADVANCED MATHEMATICAL ROUTINES****PUBLISHERS NAME: SERENDIPITY SYSTEMS, INC.**

**DESCRIPTION:** The Advanced Mathematical Routines package was designed for use by professionals in the areas of research, business, and operations management. It consists of a set of mathematical tools which provide answers to a variety of common complex numerical problems in relatively short periods of time. The package includes routines for linear regression, matrix operations, numerical calculus, differential equations, and optimization. In addition, a routine is provided for the plotting of equations. Data sets, which are automatically stored on the diskette, can be recalled on demand. Thus, repeated calculations with slightly varied input parameters are possible.

**PRICE:****TITLE: AIDA: APPLE INTERACTIVE DATA ANALYSIS****PUBLISHERS NAME: ACTION-RESEARCH NORTHWEST**

**DESCRIPTION:** AIDA is a command-oriented statistical analysis 'package' for the Apple II. It provides the data manipulation and statistical commands commonly needed in commercial or academic social science and marketing research. It is at home in other fields of research, as well - anywhere the analyst must deal with large quantities of information. Time lag transformations and a powerful regression package make it useful in economics, too. Its statistics cover the range from descriptive, through bivariate, to multivariate techniques, with case weighting.

Analyses can be done on ..SUB-sets of cases, selected either by case number or data values. Data may be transformed several ways, including any legal Applesoft statement. Data are entered either from the keyboard (with prompting), or from disk text files. Missing data, print to disk or printer, and user-written routines are supported.

AIDA allows up to 11,000 data points in memory at once (e.g., 500 cases by 22 variables), with a maximum of over 4,000 cases. A 'virtual memory' system recalls variables from separate binary disk files as they are referenced during analysis; this permits larger data files (up to 254 variables) than the computer can hold in memory. Program overlay lets AIDA run in under 8K.

The price of the AIDA program is \$235.00, with a 20 percent student discount available. This includes the open-LOS 3.3 program disk, one protected 'boot' disk, and over 50 pages of documentation and sample output. A second boot disk is provided, free of charge, upon receipt of the purchaser's agreement. Further replacement disks are provided on an exchange basis for \$10.00. Dealer rates available.

**THE AIDA COMMANDS**

cases	clear	correlate
data (input)	describe	edit
finish	free	help
histogram	keep	list
means (anova,t)	missing	mult (regression)
oneway	pair (wise t-tests)	print
rblock	rcorr	read (files)
rmeans (rank anova)	save	scat (terplot)
special	status	(in hires)
two-way	weight	transform

**The AIDA 'Encore' Package**

This disk contains several programs designed to work with AIDA, but useful on their own, as well:

REL Item Analysis and Index Construction. Tests interrelation of test items, working from a variance-covariance matrix



(up to order 1001). Features item-to-total correlations, Cronbach's alpha, inter-index and index-to-item correlations.

**SORT** Text-Sorting Utility Program. For text files.  
**INVEN** A 'card image' file data deck inventory that produces frequencies and percentages.  
**DATA** A case-wise version of AIDA's data input routine. Permits building text files up to 254 variables per case, unlimited cases. Prompts for variables by number and label; verification capability.

The Encore Package is available, on unlocked DOS 3.3, for \$50.00, \$40.00 if ordered with AIDA.

**AIDA Banner and AIDA-AID**

This disk contains two specialized programs. **BANNER** produces crosstabulation tables, with multiple column variables, upper and lower case headers and extensive variable and code labels. **AID**, or 'Automatic Interaction Detection' is an algorithm for multivariate analysis. Both programs read AIDA data files, and are contained on one DOS 3.3 disk.

**PRICE: \$150.00**

**TITLE: ANOVA**

**PUBLISHERS NAME: HUMAN SYSTEMS DYNAMICS**

**DESCRIPTION:**

Analysis of variance

1 to 8 Independent Factors

Balanced Designs

Accepts repeated measures

Up to 1400 Data Points with 48K Memory

Anova Table Output

Treatment Means and Standard Deviations

Keyboard or Disk Data Input

Video or Hard Copy Output

Data File Creation

**PRICE: \$74.95**

**TITLE: ANOVA II**

**PUBLISHERS NAME: HUMAN SYSTEMS DYNAMICS**

**DESCRIPTION:** ANOVA II is a completely rewritten new version of HSD ANOVA. Like HSD ANOVA, ANOVA II can perform a complete analysis of variance on randomized designs, between - within designs, and repeated measures designs with equal n. In addition, ANOVA II can perform a complete analysis of variance on randomized designs, and between - within designs with unequal n. ANOVA II can also perform an analysis of covariance for all previously mentioned designs with equal or unequal n.

This single program package accepts designs with up to five factors of 12 levels apiece. Printout includes cell means and sums of squares, anova tables with all interaction terms, F values, and p-values. Data file creation, review/edit and transformations are included along with a graphics capability for treatment means profiles.

**PRICE: \$150.00**

**TITLE: BIOBITS VIII: ANALYTICS**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** This system has a variety programs, some can be useful for curve analysis and others for statistics. The first three programs take data that generate curves and analyze them: as products of a fundamental plus overtones (Fourier Analysis), or for fit to Linear, Logarithmic, Exponential, or Power models



(Regression analysis).

The last two programs analyze lists of data statistically, determining means and variances. A Variance Analysis can compare many lists, measuring their correspondence by student's t-test. Approximate probabilities for the calculated t values (P'), that are useful for a first look, but tending to minimize the significance of differences, is given. Chi-Square analysis compares paired data (expected and observed) for the goodness of correspondence. As shown in tables, The Chi-Square statistic is reported for comparison with probability values.

**PRICE:**

**TITLE: COMPLEX MATHEMATICS**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Contains 8 programs that give the user the ability to perform computations of complex numbers in BASIC rather than in FORTRAN. The eight programs are:

1. Absolute Value
2. Complex Addition
3. Complex Subtraction
4. Complex Multiplication
5. Complex Division
6. Nth Roots of a Complex Number
7. Complex Exponential
8. Complex Number to a Real Power.

**PRICE: \$14.95**

**TITLE: CONDUIT**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** The application of statistical methods has become an important tool in many areas of business and industry, and in the research of most of the natural and social sciences. Yet, the methods of descriptive statistics, designed to describe and summarize data, have been receiving less and less emphasis in current textbooks on elementary probability and statistics. Computers will perform all the necessary calculations is the reason usually given. Even though computers have relieved the trouble of computing statistical measures by hand, but there is a need for adequate discussion and problem sets to aid students in understanding the various methods of descriptive statistics. To help aid the students in understanding the analogous methods to describe a population based on probability theory, there is a discussion of methods used. For example, the meaning of the terms probability distribution and expected value will be easier to grasp if students have studied frequency distributions and sample means.

Descriptive Statistics provides supplementary materials for pre-calculus statistics and probability textbooks intended to address this problem. The package includes a User's Manual, four BASIC computer programs, and three data sets. The manual discusses several methods of describing and summarizing raw data, and is designed to be used as an introduction to descriptive statistics before proceeding to probability or the methods of statistical inference.

High school algebra, and some familiarity with summation notation are the only prerequisites for use of the materials. No prior knowledge of statistics or probability is needed, and no computer programming experience is needed. Optional programming exercises are included in the manual for students with some programming background, but programming is not required nor taught in the manual.

The manual consists of four chapters discussing the descriptive

measures and four appendices describing the computer programs and data files used in the exercises. The computer programs included in the package are useful not only for the exercises in the manual, but also for problems and projects in the remainder of the course. They allow the instructor to use reasonably large sets of real or computer-simulated data in problems, projects, and demonstrations. The distributions of data sets represent three different shapes: bell-shaped, skewed, and U-shaped.

**PRICE: \$75.00**

**TITLE: CURVE**

**PUBLISHERS NAME: WEST COAST CONSULTANTS**

**DESCRIPTION:** CURVE is an easy-to-use program written entirely in BASIC. The program features capabilities to plot:

- 1). CARTESIAN EQUATIONS,  $Y=f(X)$
- 2). PARAMETRIC EQUATIONS,  $Y=h(T)$  and  $Y=g(Y)$
- 3). POLAR EQUATIONS,  $R=f(S)$
- 4). DATA POINTS OR CHARACTERS ENTERED FROM KEYBOARD.
- 5). SHADED BAR GRAPHS IN EITHER VERTICAL OR HORIZONTAL ORIENTATION
- 6). A FULLY SCALABLE ALPHANUMERIC CHARACTER SET.
- 7). LINEAR AND LOGARITHMICALLY SCALED AXES.

You can now produce professional graphs and charts using either the CURVE PROGRAM or SUBROUTINES. The CURVE PROGRAM is a keyboard interactive code which fully guides you, step-by-step, through its operation using clear messages and animated CRT graphics. No programming experience is required. Once you enter your design specifications, a plot is immediately drawn. The most elementary knowledge of graphics is all that's usually necessary. Built-in error messages save you lost time and frustration by trapping unreasonable input quantities. You may integrate the entire capability of the CURVE logic into your own programs using our CURVE SUBROUTINES package. These sixteen subroutines provide you with the flexibility to add customized hardcopy graphics to existing BASIC programs. Both program versions have been thoroughly tested and reflect our 12 years experience designing computer graphics software. Over 100 professional organizations are currently using CURVE in a wide range of technical, engineering and scientific research efforts. The programs are supplied with manuals which thoroughly familiarize the input and program lines are given with vivid illustrations of the resulting graphics output. If you already own a HILOT plotter, these are definitely the programs you've been waiting for. If you've been hesitating to buy a low-cost plotter because of lack of software, now is the right time.

**PRICE: \$50.00 Curve Program**

**\$75.00 Curve Subroutines**

**TITLE: CURVE FITTER**

**PUBLISHERS NAME: INTERACTIVE MICROWARE, INC.**

**DESCRIPTION:** Curve Fitter makes it easy for you to select the most appropriate curve to fit your experimental results. Available methods include scaling and transformations, averaging, smoothing, interpolation (polynomial, cubic spline or Stineman), and least squares fitting (polynomial, geometric or exponential). Data may be entered from the keyboard or from the disk, which uses a data format that is compatible with other IMI products, including Scientific Plotter and VIDICHART. Using an optional analog to digital converter, it is also possible to enter data directly from instruments. In any case, the data may consist of X, Y pairs or Y values at a fixed X interval. After you enter

your data, a high resolution graph is drawn automatically and numeric labels are printed on the axes. Next, you select one of the curve fitting methods listed above and observe the results, superimposed on your experimental points. You may visually compare the results produced by several different methods, using four different plotting symbols to distinguish the curves. When you have selected the fitted curve that best suits your input data, you may enter a series of unknowns for evaluation. A listing of the X or Y values interpolated from the fitted curve will then be printed.

Curve Fitter is designed for your convenience. At any time, you may save the working files on disk or repeat the fitting procedure. All previous answers become the defaults, so that you can make changes quickly. The information needed to repeat the same procedure may be saved on disk for future use with similar data. Five demonstrations are included on the disk, in order to demonstrate the many uses of Curve Fitter.

PRICE: \$35.00 disk with a 33 page manual

\$ 5.00 Curve Fitter Manual

**TITLE: DATA SMOOTHER**

**PUBLISHERS NAME: DYNACOMP, INC.**

**DESCRIPTION:** May be used to rapidly derive useful information from noisy business and engineering data which are equally spaced. The software features choice in degree and range of fit, as well as smoothed first and second derivative calculation. Also, there is an automatic plotting of the input data and smoothed results, included.

PRICE: \$19.95 Cassette

\$23.95 Diskette

**TITLE: DATA SYSTEM**

**PUBLISHERS NAME: COMPUTING CONCEPTS**

**DESCRIPTION:** The storage and retrieval of numeric and alphanumeric data, filed on disk. There are up to 15 headings per entry. Calculation of mean, total, root mean square, range, standard deviation, and coefficient of variation for all or selected numeric data, and plotting of data on a linear or log scale with plotting of least squares fit and calculation of correlation coefficient. Graphs may be saved on disk for later recall.

PRICE: \$49.95

**TITLE: DB MASTER STAT PAK**

**PUBLISHERS NAME: STONEWARE MICROCOMPUTER PRODUCTS**

**DESCRIPTION:** DB MASTER STAT PAK is a complete accessory statistics package for DB MASTER users. Its features include:

1. Performs statistical analysis on data contained in DB MASTER files.
2. Uses values from any numeric, dollar/cents or computer fields.
3. Uses Select formats to choose which records to include in a test.
4. Tests available include:
  - Mean, Standard Deviation & Standard Error
  - Coefficient of Variation
  - Frequency Distribution
  - Unpaired t-Test
  - Mann-Whitney U Test
  - Wilcoxon Paired Sample Test
  - Chi-Square Test



- Linear Regression
- Correlation
- One-way ANOVA with Newman-Keuls Test

5. Based on ED-SCI Statistics Package.

**PRICE: \$99.00**

**TITLE: DESCRIPTIVE STATISTICS & REGRESSION ANALYSIS**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

**DESCRIPTION:** 3 Programs-Descriptive Statistics ( standard deviation, kurtosis, z-scores, mean, variance). Curvilinear Regression (inverse, exponential, logarithmic, linear, polynomial). Multivariable Linear Regression.

**PRICE: \$21.95**

**TITLE: DESK CALCULATOR II**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Tired of explaining to your friends why you need both a computer and a calculator? Then use our 98 functions: Hex-decimal, Trig., Metric, Stat, Ten memories, and much more. Hardcopy of calculations on your printer (optional).

**PRICE: \$30.00**

**TITLE: DOUBLE PRECISION FLOATING POINT FOR APPLESOFT (TM)**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Extends the accuracy of the arithmetic available on the Apple from nine digits to a full 21 digit precision on all functions in an Applesoft compatible format. This is accomplished by providing an assembly language package which interfaces to standard Applesoft through the ampersand vector. Several features are provided that will increase your accessibility in expressing more than nine digits:

arithmetic operations (+-\*/); arithmetic expressions; 21 digit constants and variables; INPUT and PRINT statements handle 21 digit value; simple interface with Applesoft using the "&" feature; automatic loader hides DPFP below your Applesoft program; fast efficient Assembly Language coding; Compact, only 2048 bytes; works with Applesoft ROM card, Applesoft in RAM, Applesoft in Language System; Programs are included to compute ABS, SQR, LOG, EXP, SIN, COS and ATN in double precision.

**PRICE: \$29.95**

**TITLE: EASI/ARIMA**

**PUBLISHERS NAME: THE WINCHENDON GROUP**

**DESCRIPTION:** EASI/ARIMA is designed for the non-statistician who could not care less about the statistical properties of a forecast, but still wants to take advantage of the power of the ARIMA. Typically, this person is a commodity or stock trader.

**EASI/ARIMA:**

- \* Reads Computrac databases (we will also try to interface with any other database, at no extra cost)
- \* Automatically selects the best model
- \* Chains programs to link the three Box-Jenkins steps of identification, estimation and forecasting into one smooth procedure
- \* Allows easy updating of forecasts to use the most recent information

**PRICE: \$300.00**

**User's Manual only \$15.00**



**TITLE: ELEMENTARY ARITHMETIC EDU-DISK**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** The Elementary Arithmetic Edu-Disk was written and designed by a professional educator. It contains an arithmetic readiness test and four interactive lessons designed to teach elementary Addition, Subtraction, Multiplication, and Division, on nine different skill levels. These lessons are rich in interactive tutorials and use extensive color graphics and computer simulated voice to maintain student interest and reinforce basic concepts. The student's scores are maintained on disk and are accessible only through a special teacher's program. The Elementary Arithmetic Edu-Disk is self-demonstrating and requires little or no instructor assistance. This program is recommended for the student with no prior arithmetic experience, and as a supplement in higher level remedial situations.

**PRICE:**

**TITLE: ELF STATISTICAL PACKAGE**

**PUBLISHERS NAME: THE WINCHENDON GROUP**

**DESCRIPTION:**

**CREATING, CORRECTING, AND UPDATING A DATABASE**

ELF uses a masking system to create, correct and update a database. To create a database, you establish the names you want assigned to variables. From now on, you refer to variables by name instead of position or "X(1)". After a chance to correct any mistakes in names, and a warning on duplicate names, you proceed to enter the data using masks. The exact mask depends on the size of your screen. After entering each observation, you get to review it to correct any errors. ELF automatically calculates the amount of room available and constructs as large a buffer as possible to reduce the need to write to disk to an absolute minimum.

ELF allows you to correct any mistakes made in entering data, or add any revisions you get after creating the database. You can also add new variables to the database, or add new observations. Of course, you can correct or change the names of variables. This is also masked for easy use.

**TRANSFORMING DATA**

You can transform data using all of the usual BASIC commands. Selected observations can be removed from the database. All of the usual functions such as LOG, SIN, and raising to a power are available; you can also lag variables. And, of course, the usual addition, subtraction, division and multiplication. Throughout ELF, variables are referred to by name.

**UNIVARIATE STATISTICS**

ELF will calculate the common univariate statistics and some not so common ones. As in all analytical modules, you may weight your data. Statistics available include: mean, standard deviation, variance, standard error, minimum, maximum, range, skewness, kurtosis, sum, and number of observations.

**CROSSTABS, FREQUENCIES AND HISTOGRAMS**

ELF allows the user to construct tables (crosstabs) of up to three dimensions. A one-dimensional table indicates the number of times a variable takes on given values and can be presented as either numbers or a histogram (bar chart). For two- and three dimensional requests, ELF calculates Chi-squared, Cramer's V, Phi, and Contingency Coefficients.

**CORRELATION COEFFICIENTS**

ELF calculates correlation coefficients. Key calculations are

done in machine language to increase speed.

#### STEPWISE REGRESSION

ELF lets you do stepwise multivariate regression. You tell ELF which variable to enter or remove. ELF does so, reporting the R-Square, Adjusted R-Square, overall F, regression coefficients, and t-statistics. An intercept (constant) may be included if the user desires. After a model is selected for further investigation, ELF will compare the actual and predicted values of the dependent variable with both tabular and graphical displays. You may, also, predict values of the dependent variable, and ELF calculates 95 percent confidence intervals. With the transformations available, ELF can do the most frequently desired non-linear regressions such as polynomial, exponential, logarithmic, and time series. Key parts are in machine code for the utmost speed possible.

#### FACTOR ANALYSIS

This is one of ELF's most sophisticated statistical procedures and is not available elsewhere on a microcomputer. ELF does either principal components or iterated factor analysis. For either option, the user sees the percentage of variation explained and the eigenvalues before selecting the number of factors to be retained. The unrotated factor matrix and communalities are reported. The user can select from among the standard orthogonal rotations (varimax, equamax, quartimax, or none). ELF reports the unrotated and rotated factor matrices, the transformation matrix, and the factor scoring matrix. Iterated principal factor analysis offers the squared multiple correlations (SMC) or maximum off-diagonal element of the row as initial estimates of the communalities. Key parts are written in machine code, and the latest in eigenvalue algorithms are used.

#### DISCRIMINANT ANALYSIS

Another of ELF's capabilities which is unique among microcomputer packages is discriminant analysis. ELF does this stepwise allowing the user to enter or remove variables at will. ELF will predict to which category each observation belongs and creates a summary table. Erroneous observations and new observations are flagged.

#### OTHER CAPABILITIES

In addition to the capabilities mentioned above, ELF can do:

- \* paired and unpaired t-tests on means
- \* scattergrams and simple regressions
- \* significance levels of t, F, Chi-Squared and normal statistics

PRICE: \$200.00

User's Manual only \$15.00

**TITLE: EXPLORATORY DATA ANALYSIS**

**PUBLISHERS NAME: CONDUIT**

**DESCRIPTION:** The way that people approach data has been given a new dimension by the Exploratory Data Analysis (EDA). Students and teachers alike can easily uncover features concealed among masses of numbers. Unfortunately, the diversity of these techniques has at times discouraged students and data analysts who may want to learn a few methods without studying the full collection of exploratory tools. Also, the lack of precisely specified algorithms has meant that computer programs for these techniques have not been widely available. The widespread adoption of exploratory methods has been delayed because of the absence of software.

This package of computer programs and text, Applications, Basics, and Computing of Exploratory Data Analysis (ABCs of EDA), provides the needed tools to make exploratory analysis techniques readily available. Nine exploratory techniques are emphasized. They are:

- \* stem-and-leaf displays
- \* letter-values
- \* x-y plotting
- \* rootograms
- \* coded tables
- \* median polish
- \* boxplots
- \* resistant line
- \* smoothing data

In the book, each of these techniques is covered in a chapter which lays the foundations for understanding the technique, describes useful variations, illustrates applications to real data, and provides computer programs in FORTRAN and BASIC. Students learning EDA soon becomes familiar with many pencil-and-paper techniques for data display and analysis. In addition, the computer programs permit these to its users:

- \*combine exploratory methods with other data analytic techniques already programmed
- \* explore a large amount of data
- \* concentrate on the results rather than the arithmetic
- \*eliminate tedious arithmetic and the errors that inevitably creep in

The text does not require a college-level math and only an introduction to statistical concepts. It is designed to serve as a supplementary text to introduce the ideas and techniques of exploratory data analysis into a beginning course in statistics. The text provides two detailed outlines to illustrate how to incorporate EDA techniques into a curriculum.

After studying the examples and gaining experience with the EDA techniques, students who already know some statistics may want to learn more about how an EDA technique compares with a similar traditional method. Special sections provide background information. Each chapter also contains a short discussion of programming details, including the algorithm used by the computer program, alternative methods, and potential implementation difficulties. Appendices provide information for those who wish to incorporate the programs into existing software.

**PRICE: \$150.00** includes copy of ABCs of EDA and disk

#### **TITLE: FUNCTION PLOTTER**

**PUBLISHERS NAME: FULLMER ASSOCIATES**

**DESCRIPTION:** A utility program that aids analysis of functions. User inputs up to five analytic functions in BASIC syntax, specifies range of independent variable, and number of points to calculate and plot. Computer performs calculation and plots functions in High Resolution graphics to ranges specified. The freedom to redefine plot ranges to expand or compress plot to any desired degree for analysis, is given to the user. Has vertical hairline to read about exact value of any plotted point selected...Helps pinpoint maxima, minima, others. Program may be rerun to recalculate and plot any region of interest different in detail. Other features include: Y-plot inversion, Color-shading, Line-connect, Step-plot, Bar-plot, sliding viewing window. Program can be used to provide numerical solutions to differential equations.

**PRICE: \$75.00**



**TITLE: GENERAL MATHEMATICS-1**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Contains 15 programs useful to anyone who wants to improve their math skills and accelerate their computations. The programs are:

1. Log to Any Base
2. New Coordinates
3. Rectangular/Polar Coordinates
4. Permutations
5. Combinations
6. Vector Cross-Products
7. Vector Scalar Products
8. Max/Min Locator
9. Number Rounder
10. Dimension Scalar
11. Histogram
12. Circle Finder
13. Nth Root of a Number
14. Normally Distributed Random Numbers
15. Rational Fractions.

**PRICE: \$14.95**

**TITLE: HSD ANOVA**

**PUBLISHERS NAME: HUMAN SYSTEMS DYNAMICS**

**DESCRIPTION:** Analysis of variance program suitable for scientific research and business analyses. Analyzes balanced designs of from one to eight independent variables with as many levels as necessary. It can handle designs composed of between-subjects and/or within subject factors.

Design specifications are very simple to define. Just boot the disk and start analyzing data. Data entry is from keyboard or disk, with data review and edit.

Output is a complete ANOVA table with F ratios and p-values. Output can be obtained on CRT or with any printer.

**PRICE: \$74.95**

**TITLE: HSD REGRESS/MULTIPLE REGRESSION PROGRAM**

**PUBLISHERS NAME: HUMAN SYSTEMS DYNAMICS**

**DESCRIPTION:** HSD REGRESS performs regression analysis for sets of data containing up to 25 variables, and up to 300 cases per variable. The analysis is performed on all variables input, or on any subset of variables, in any order.

HSD REGRESS is menu-driven. You choose which of the 5 programs will be run.

**DATA ENTRY**

Allows keyboard entry of data, creation of standard sequential data files, and data listing.

**REVIEW/EDIT**

Allows reviewing, editing, and deleting of data files.

**TRANSFORMATIONS**

Performs a variety of numerical transformations on your data files.

**HSD REGRESS/REGRESSION**

Performs a regression analysis for any specified set of data files. Output includes descriptive statistics, correlation matrix, semi-partial correlations, full regression analysis, predicted and residual scores with their files.

**SCATTERPLOT**

Produces high resolution scatterplots for variables, residuals and predicted values.

HSD REGRESS performs a least-squares regression analysis. The program operates on a set of predictor (independent) variables



and a single criterion (dependent) variable.  
After DATA ENTRY creates sequential data files on disk for your variables. REGRESSION reads those data files into memory. REGRESSION then performs a regression analysis using all of your variables or any subset of your variables in any order.  
**PRICE: \$99.95**

**TITLE: HSD STATS**

**PUBLISHERS NAME: HUMAN SYSTEMS DYNAMICS**

**DESCRIPTION:** A menu driven statistics package which accepts 7 samples of 200 points each. The package offers:

- \* descriptive statistics
- \* 10 data transformations
- \* frequency distribution and bargraph
- \* percentile ranks and points
- \* 1 or 2 variable Chi-Square
- \* correlation matrix for up to 7 variables
- \* 3 t-tests
- \* file creation from single or combined samples
- \* arithmetic inter-sample manipulations
- \* printing of raw data and results
- \* single linear regression
- \* scattergram

Numerical results can be printed with any printer. Graphics results can be stored on disk and accessed with any graphics printer.

**PRICE: \$99.95**

**TITLE: INTRODUCTION TO PSYCHOLOGICAL STATISTICS**

**PUBLISHERS NAME: COM PRESS**

**DESCRIPTION:** This text is intended to be used as the sole text in an undergraduate course in psychological statistics of the sort typically required of psychology majors. In the introduction the author states:

The primary aim is to teach the student to understand and be able to use those statistics that he or she will most likely want to use as an undergraduate psychology major. The second major aim of this text is to give a reading knowledge of some kinds of multivariate analysis.

This text is written in accordance with the belief that understanding refers to a correspondence between a set of theoretical statements and a nonverbalizable set of hunches, expectations, and intuitions. It is possible to memorize a theory without understanding it at all. This text is aimed not only at presenting the student with a number of precisely stated rules and formulas, but also at helping him or her to develop statistical intuition.

This text is computer-oriented; however, the computer is used in this course simply as a tool. Students will not learn to write computer programs, but will learn how to use computer programs, but will learn how to use computer programs when they can be helpful. Using the computer will make it possible to work through realistic data analysis problems without getting lost in masses of arithmetic.

This text uses very little mathematics beyond arithmetic and review of the mathematics it does use is in the appendix.

The first four chapters of this book are concerned with the descriptive use of statistics. Chapters 5 through 13 are concerned with the inferential use of statistics.

**THE PROGRAM:**

- \* generates rectangularly distributed random numbers
- \* computes the correlation between variables

- \*computes the first three moments about zero from a frequency distribution
- \* computes the first three moments about zero from an ordered set of numbers
- \* generates samples of random digits
- \* computes the between group and the within group sums of squares
- \* generates rectangularly distributed random digits
- \* computes the mean and standard deviation (biased and unbiased) of a set of unordered numbers
- \* computes the first three moments about the mean from an unordered set of numbers
- \* computes the correlation of X and Y, the regression of Y on X, the predicted Y's, and the residuals.
- \* computes the first three moments about zero and about the mean for a frequency distribution

**PRICE: \$60.00** includes disk, instructor's and student manuals

**TITLE: LAB STATISTICS PACKAGE**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** Lab students in high school and college need to understand how to use their experimental results scientifically. The Lab Statistics Package, developed by a Physics professor, uses hi-res graphics to provide an interesting, interactive demonstration of least squares curve fitting (linear, exponential, geometric, or parabolic); and it also performs statistical calculations on actual data, giving the mean, standard deviation, correlation, and more, for on going usefulness.

**PRICE: \$50.00**

**TITLE: LINEAR PROGRAMMING**

**PUBLISHERS NAME: MPA ENTERPRISES**

**DESCRIPTION:** A linear programming package using the simplex method. A maximum of 50 constants and 50 variables can be used minimize or maximize the objective function. Regular variables, slack variables, surplus variables, and dual variables can be solved.

**PRICE: \$25.00**

**TITLE: LINEAR REGRESSION**

**PUBLISHERS NAME: MPA ENTERPRISES**

**DESCRIPTION:** Solves multiple linear, polynomial, exponential, and geometric regression. Output includes:

- \* Anova table
- \* Coefficients
- \* F-statistics
- \* Dubin Watson
- \* T-statistics
- \* R2
- \* Residuals

**PRICE: \$25.00** Cassette

**TITLE: MICRO TSP VERSION 3.1**

**PUBLISHERS NAME: MICRO TSP**

**DESCRIPTION:** The standard Micro TSP has the following new features:

- \* Can create and use files in the DIF format used by VisiCalc and VisiPlot.
- \* High-Resolution plots and scatter diagrams can be saved on disk for later printing.

\* The observations in time series can be identified with calendar dates as well as observation numbers, for example:

SMPL 1968.1 1981.4

tells Micro TSP to use dates from the first quarter of 1968 through the forth quarter of 1981.

**PRICE:**

**TITLE: MULTIPLE REGRESSION ANALYSIS**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION:** After several requests we have completed a standard multiple regression analysis for multi purpose predictions. The program may be used in business, education, or in any field where historical data is used to predict future events. The Turf Analysis program is very similar to this program, but it also includes the correlation matrix, the inverted matrix, the sum, mean and standard deviation of each of the variables. Multiple Regression Analysis has been fully tested and documented.

**PRICE: \$29.95**

**TITLE: NUMERICAL ANALYSIS**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** HI-RES 2-dimensional plot of any function. Automatic scaling. At your option, the program will plot the function, plot the INTEGRAL, plot the DERIVATIVE, determine the ROOTS, MAXIMA, MINIMA, INTEGRAL VALUE.

**PRICE: \$19.95**

**TITLE: REGRESS**

**PUBLISHERS NAME: HUMAN SYSTEMS DYNAMICS**

**DESCRIPTION:**

Complete Multiple Regression Analysis

Up to 25 Variables

Up to 300 Cases/Variable

Correlation Matrices

Regression on Any Subset of Variables

Regression on Any Order of Variables

Hi Res Scatterplot and Residual Plot

Keyboard or Disk Data Input

Case by Case or Variable by Variable input

Data File Creation

Predicted and Residual Scores File Creation

**PRICE: \$99.95**

**TITLE: REGRESSION 1**

**PUBLISHERS NAME: DYNACOMP, INC.**

**DESCRIPTION:** REGRESSION 1 is a unique and exceptionally versatile one dimensional least squares "polynomial" curve fitting program. Features include very high accuracy; an automatic degree determination option; an extensive internal library of fitting functions; data editing; automatic data and curve plotting; a statistical analysis (e.g. standard deviation, correlation coefficient, etc.) and much more. In addition, new fits may be tried without re-entering the data. REGRESSION 1 is certainly the cornerstone program in any data analysis software library.

**PRICE: \$19.95, Cassette \$23.95, Diskette**

**TITLE: REGRESSION II (PARAFIT)**

**PUBLISHERS NAME: DYNACOMP, INC.**

**DESCRIPTION:** Designed to handle those cases in which the

parameters are imbedded (possibly nonlinearly) in the fitting function. The user simply inserts the functional form, including the parameters (A(1), A(2), etc.) as one or more BASIC statement lines. Data and results may be manipulated and plotted as with REGRESSION I. REGRESSION I can be used for polynomial fitting, and PARAFIT for those complicated functions.

PRICE: \$19.95 Cassette

\$23.95 Diskette

**TITLE: SOFTWARE PAC #3**

**PUBLISHERS NAME: BASIC BUSINESS SOFTWARE, INC.**

**DESCRIPTION:** The following programs are included:

- \* F-Distribution
- \* Chi-Square Distribution
- \* Chi-Square Evaluation
- \* Moments, Skewness & Kurtosis
- \* Poisson Distribution
- \* Logarithmic Normal Distribution
- \* Power Curve Fit
- \* Normal Distribution
- \* Spearman's Rank
- \* Linear Regression
- \* Weibull Distribution
- \* T-Statistics Evaluation
- \* Anova (one-way)
- \* Anova (two-way)
- \* Permutations + Combinations
- \* Binomial Distribution
- \* Bivariate Normal Distribution
- \* Exponential Curve Fit
- \* Basic Statistics
- \* Logarithmic Curve Fit
- \* T-Distribution
- \* Geometric Distribution
- \* Contingency Table
- \* Multiple Linear Regression

PRICE: \$35.00

**TITLE: STATISTICAL ANALYSIS**

**PUBLISHERS NAME: SPECTRUM SOFTWARE**

**DESCRIPTION:** This menu driven program performs LINEAR REGRESSION analysis, determines the mean, standard deviation and plots the frequency distribution of user-supplied data sets.

PRICE: \$19.95

**TITLE: STATISTICAL ANALYSIS GROUP**

**PUBLISHERS NAME: INSTITUTE OF INDUSTRIAL ENGINEERS**

**DESCRIPTION: CONTAINS:**

**PROGRAM 1: TEST OF HYPOTHESIS**

This model will calculate the traditional test of hypothesis for mean and variance of data supplied versus some proposed values.

**PROGRAM 2: DATA ANALYSIS**

This program will provide information regarding the mean, variance, and higher moments for data supplied. It will also plot the resulting histogram.

**PROGRAM 3: POLYNOMIAL CURVE FIT**

This program will calculate the "best" Least Squares Polynomial Curve Fit for a series of data supplied. The program will allow the user to specify the degree of the polynomial or search for the "Best" polynomial fit.



**PROGRAM 4: DISTRIBUTION FITTING**

This program will determine if a particular distribution fits historical data supplied. For instance, the Chi-Square test will be applied to the "Pest" Normal Curve approximated by a set of data. The program will then determine whether or not this data could have come from such a distribution.

**PRICE:**

**TITLE: STATISTICS**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** Provides the ability to carry on many of the statistical calculations ordinarily found in FORTRAN drive SPSS programs, including; mean, variance, standard deviation, Pearson correlation, normal distribution, probability and frequency, Chi-Square distribution, Chi-Square test, T-test.

**PRICE: \$9.95 Tape**

**\$15.95 Disk**

**TITLE: STATISTICS (BIO) II**

**PUBLISHERS NAME: A2 DEVICES**

**HARDWARE REQUIREMENTS: two disk drives**

**DESCRIPTION:** This package is for those students and research workers in the biological and social sciences whose primary requirement is graphical representation and analysis of data. This statistics packages uses Apple high-resolution graphics to demonstrate the following tests:

LINEAR REGRESSION with 96% confidence limits

DATA PLOTTING

CURVILINEAR REGRESSION: Selects best-fitting equation from a combination of any two of the following functions: Sine, Cosine, Exp, Log(e), Inverse, Linear, Square, Square Root, Sin-l, Cos-l

EXPONENTIAL REGRESSION:  $y = a(ekt) + c$

This package provides an optional graphical output of the above tests on the Watanabe WX4671 plotter with Takahasi interface. Also included are ANOV, Student T tests, with calculated probability, plus two nonparametric tests; Mann-Whitney U test and Wilcoxon Paired test. All programs include extensive data editing and storage facilities.

**PRICE: \$60.00**

**TITLE: STATISTICS PAC**

**PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**DESCRIPTION:** Contains its own data base system along with a battery of programs for curve fitting, probability, and general statistics. HIRFS plotting is featured on the program. Elements of the Pac include analyses for permutations, combinations and factorials. Distributions include Binomial, Normal, Chi-Square, Poisson, Student-t Distribution. Data Base element may be purchased separately for \$50.00

**PRICE: \$100.00**

**TITLE: STATISTICS PACKAGE**

**PUBLISHERS NAME: ONGOING IDEAS**

**DESCRIPTION:** This program has some very powerful programs.

**INCLUDED:**

Scattergram

Two-Way Contingency Table

Student T-Test with Welch modification for unequal variances

Wilcoxon Rank Sum (Mann-Whitney) Test

\* Wilcoxon Signed Rank Test  
**PRICE: \$24.95 Cassette**

**TITLE: STATISTICS WITH DAISY**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION:** This package is suitable for business, scientific, and social applications. It includes:

- \* full user assistance facilities HELP and INFO
  - \* mathematical and time-series transforms
  - \* users can add own programs as new DAISY commands
  - \* model testing and evaluation
  - \* hypothesis testing
  - \* correlations
  - \* elementary statistics (mean, standard deviation, etc.)
  - \* analysis of variance
  - \* multiple regression (6 different procedures)
  - \* hi-res plots
  - \* nonparametric statistics
  - \* data table can be set for dozens of variables or hundreds of observations
  - \* active data is in RAM for quick access
  - \* disk commands to save, enter, examine, overlay data
- Data entry is through a window view into the data table.  
**PRICE: \$79.95**

**TITLE: STATPRO (MAINFRAME STATISTICS ON AN APPLE)**

**PUBLISHERS NAME: BLUE LAKES COMPUTING**

**DESCRIPTION:** A package for the professional researcher seeking solutions with a minimum of effort is the Pascal software package.

Grouped into a modular format for sales purposes yet which allows the user to transfer data between modules and other programs with easy to use prompts.

**INCLUDED:**

- Graphic printing & editing
- Data transformations
- Mailing label database
- Does cross tabulation
- Sample data for first time use
- Real number data base
- Questionnaire database
- General category database
- Corvus compatibility

An integrated database system designed for extensive number crunching.

Unique in being non-memory dependent allows databases to be limited in size only by disk space. Statpro can enter, receive, send, sort, and transform data.

Transformations include Arithmetic Logarithmic, Exponential Trigonometric, Powers & Square Roots, Conversions, Random Numbers, Standardized Observations and over 40 English to Metric or Metric to English conversions. Contains several statistical analysis programs, all interlinked and designed to analyze the database records.

Has extensive color graphic capabilities, a graphic screen editor, multiple plots per screen, user or computer defined access limits, and choice of symbols and lines. Printing a graph only takes 30 to 120 seconds depending on whether the printer is an Anadex, Epson, Paper Tiger or Silentype.

**PRICE:**

**TITLE: STATS****PUBLISHERS NAME: HUMAN SYSTEMS DYNAMICS****DESCRIPTION:**

Analysis of 8 samples of 250  
Descriptive Statistics  
10 Data Transformations  
Frequency Distribution, Bargraph  
Chi-Square, Scattergram  
Correlation Matrix  
Linear Regression  
3 T Tests  
Keyboard or Disk Data Input  
Video or Hard Copy Output  
Data File Creation

**PRICE: \$99.95****TITLE: STEPWISE MULTIPLE REGRESSION****PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Patterned after the UCLA BIOMED multiple regression series, the STEPWISE MULTIPLE REGRESSION is a statistical analysis program. The program allows you to use the stepwise regression analysis to test accurately the strength of relationships between variables. Even up to 60 in a single run. A single disk is capable of storing up to 64 observations for each of 100 variables. There is virtually no limit to the total number of observations possible, by using multiple disks. The program determines all the usual descriptive statistics for any multivariate linear regression, including:

- \* standard deviations
- \* F-values
- \* multiple correlation coefficients
- \* residuals
- \* means
- \* correlations
- \* regression coefficients
- \* and others

The program also provides the correlation matrix and the stepwise additions (or deletions) of variables to the explanatory model. The Stepwise Multiple Regression has a unique feature, it plots residual values using Apple's high-resolution display capability. If your system includes an Apple Silentype printer, you can obtain hard-copy output of these detailed graphs, too.

**THIS PROGRAM:**

- keeps confidential data out of large mainframe environments
- reduces your large, expensive timesharing systems to perform regression analysis in your research
- frees you from the down time, restricted availability, and other disadvantages of timesharing systems
- lets you conduct remote investigations on-site, anywhere there's an electrical outlet

The system consists of 11 programs contained on a single master disk - five programs for data management, four for calculations and reporting results, and two for system integration. 11 of the programs are easily selected from a main menu, and all are linked to simplify running the system by choosing the appropriate option on the main menu, you can: configure your system; create and prepare variable data disks and back-ups; update, list, and add observations to existing variable disks; and perform or repeat stepwise multiple regression analyses.

**PRICE: \$150.00****TITLE: TRIG/CIRCLE TANGENT**

**PUBLISHERS NAME: COMPUTER HOUSE DIV/FLC, INC.**

**DESCRIPTION:** This program converts radians to degrees or vice/versa, it will display any trig function, it will calculate any unknown of a right or oblique triangle to 5 decimal places and/or degrees - minutes - seconds. It also calculates X and Y coordinates (Z and X for NC Lathe Programming) for tangent points for either one or two circles.

**PRICE: \$110.00**

**TITLE: TWG/ARIMA**

**PUBLISHERS NAME: THE WINCHENDON GROUP**

**DESCRIPTION:** TWG/ARIMA is designed for the statistically sophisticated user who desires the full capabilities of seasonal and non-seasonal modeling, and full control over all phases of the procedure.

**TWG/ARIMA offers:**

- \* Seasonal and non-seasonal models
- \* Box-Cox transformations
- \* User control over all options

**PRICE: \$300.00**

**User's Manual only \$15.00**



## MEDICAL

Today the Apple Computer enjoys a wide range of applications in the various health care disciplines. These inexpensive quality computer systems are being used for everything from diagnostic aids to billing and from budgeting to medical education.

Many of the microcomputers available suffer from a lack of quality end user software. Fortunately, Apple does not. This fact is witnessed by the very size of the volume you are now holding in your hand. Whether you be a physician, nurse, therapist, administrator, educator, biomedical engineer or any other member of the health care community, there is a wide selection of software programs and peripherals that can help you provide better and more inexpensive patient care.

Rolland Love

## MEDICAL EDUCATION

As in other educational disciplines, the Apple computer has made a tremendous impact on the business of educating people in the various allied health care fields. For all the old reasons and a few new ones, we are witnessing an ever growing number of microprocessors in general and Apple computers in particular arriving on the health care education scene. We all know about the Apple's convenience, low cost, ease of operation, etc. But probably the most significant of all the reasons for utilizing an Apple in medical education is the subject of this book; the availability of a tremendous amount of software for this particular microcomputer.

However, of this large quantity of software available for the Apple computer, a very small amount of it is developed for medical and paramedical education. This is not suprising. The problems faced by producers of medical oriented CAI are substantially different from those encountered by software in other disciplines. There is the matter of quantity. Health care CAI users require that a reasonable amount of material be available before they can justify the purchase of the hardware or any software. It would be unreasonable to assume that a hospital or school would purchase an Apple when only a few CAI programs are available to run on it. This is especially true in the hospital setting where there is usually very little inter-departmental use of the computers. In addition to this the actual market base for medically related CAI is quite small. For instance, there are only about 7,000 JCAH accredited hospitals in operation compared to about 100,000 public schools in the general education marketplace. Never the less this small market demands and deserves many high quality, user friendly CAI programs.

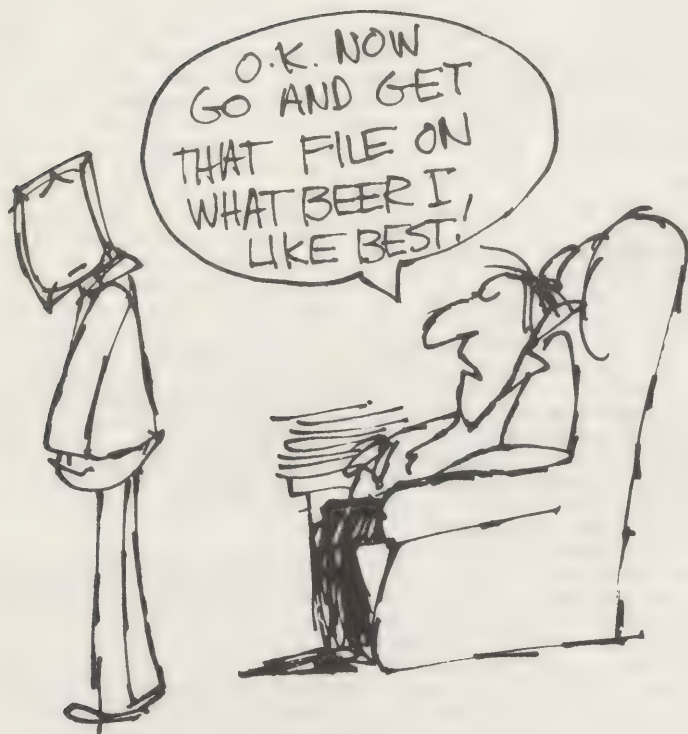
There is also the matter of quality. This double barreled concern includes the quality of the content as well as the quality of the computer programming itself. A potential user of Medi-Sim CAI for respiratory therapy recently expressed the fear that our programs would be either produced by a person expert in the field of respiratory therapy in which case the programming would probably not be good or by a computer programmer in which case the clinical content would be suspect. Indeed, for an organization to be able to produce quality health care CAI both concerns must be addressed.

As the users of medical oriented CAI you too must be aware of these concerns. As you select material to augment your curriculum you must choose suppliers that have a good reputation for not only supporting the CAI that they are currently marketing, but are also committed to developing additions to their library on a regular basis. High standards of programming excellence must be met and it should go without saying that the clinical aspects of the material must be impeccable. You should insist that all CAI purchased by you come with a 100% satisfaction guarantee. Any reputable software developer will gladly do this.

And you can help. You can help by staying in touch with the software developers. This symbiotic relationship between the user and the medically oriented CAI developers depends on good communications in order to be fruitful for both. Let them know what you need. Attend the various national and state meetings and invite CAI developers to participate. And you should expect the quality of materials to be every bit as good as the excellent service you are expected to render in your field of endeavor.

Medical CAI is just now in the crawling stage but with care and nourishment and understanding by all concerned, we can expect it to grow just as quickly and strongly as the rest of the computer world has.

David Assmann  
Jim Morey  
Medi-Sim, Inc.



## MEDICAL

### BUSINES/BILLING

ACCOUNTS RECEIVABLE . . . . .	MD-1
ADAMM . . . . .	MD-1
AUTOMATED MEDICAL ADMINISTRATOR . . . . .	MD-1
CAMP COMP 1 . . . . .	MD-2
CARDIO-RESPIRATORY DEPARTMENTAL ANALYSIS . . . . .	MD-3
CFT'S "HEALTHCARE SOFTWARE PACKAGE" . . . . .	MD-3
COMMA - (COMPREHENSIVE MEDICAL MANAGEMENT FOR THE APPLE) . . . . .	MD-4
DENTAL BILLING SYSTEM . . . . .	MD-4
DENTAL INSURANCE FORM WRITER . . . . .	MD-5
DENTAL SECRETARY . . . . .	MD-5
DENTAL-MEDICAL OFFICE DATA . . . . .	MD-5
DENTISTAID (TM) . . . . .	MD-6
DOCTOR'S OFFICE COMPANION . . . . .	MD-6
ELEMENTS OF MEDICAL TERMINOLOGY . . . . .	MD-7
FRONT DESK MANAGER . . . . .	MD-7
MEDICAL BILLING SYSTEM . . . . .	MD-7
MEDICAL SECRETARY . . . . .	MD-8
MEDPAC . . . . .	MD-8
MEDPAC/DENTPAC . . . . .	MD-9
PHYSICIANS MANAGEMENT INFORMATION SYSTEMS . . . . .	MD-9
RESPACCOUNT . . . . .	MD-9
RESPACCOUNT II . . . . .	MD-9
SCHEDULE PROCESSOR . . . . .	MD-10
SOFT-CHIROPRACTIC . . . . .	MD-10
SOFT-DENTAL . . . . .	MD-10
SOFTCARE OVERVIEW . . . . .	MD-10

### EDUCATION

CIRCULATION-ORGANS . . . . .	MD-13
CIRCULATION-SYSTEM . . . . .	MD-13
CLINICAL LABORATORY ANALYSIS SYSTEM I . . . . .	MD-13
COMPUTERIZED CLINICAL SIMULATIONS AND CAI . . . . .	MD-13
MICROCOMPUTERS AND PHYSIOLOGICAL SIMULATION . . . . .	MD-15
MISC. PROFESSIONAL DISK . . . . .	MD-15
PROFESSIONAL DISK . . . . .	MD-16
REPRODUCTION ORGANS . . . . .	MD-16
REPRDUCTION-PROCESS . . . . .	MD-16
THE DIGESTIVE SYSTEM . . . . .	MD-16
THE HEART . . . . .	MD-16

### TREATMENT/DIAGNOSTIC

ABG QUALITY CONTROL . . . . .	MD-17
ABG STERILIZATION . . . . .	MD-17
ALCOHOLIC TEST . . . . .	MD-17
ARTERIAL BLOOD GAS INTERPRETATION . . . . .	MD-17
CEPHALOMETRIC ANALYSIS . . . . .	MD-17
HEART ATTACKS . . . . .	MD-18
HYPNOSIS . . . . .	MD-18
MEDICAL DATA DIAGNOSTICS (MDD) . . . . .	MD-18
MICROLOOP . . . . .	MD-18
NUTRIONICS METABOLIC MANAGEMENT SYSTEM . . . . .	MD-19
PATIENT WORK-UP . . . . .	MD-19
PULMONARY FUNCTION SPIROMETER . . . . .	MD-19
PHYSICAL EXAM . . . . .	MD-19
SPIROMETRY INTERPRETATION . . . . .	MD-19
SPIROSOFT SYSTEM ONE . . . . .	MD-20



## **BUSINESS/BILLING**

### **TITLE: ACCOUNTS RECEIVABLE**

**PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS: Centronics 739 printer with grappler interface; two disk drives**

**DESCRIPTION:** Accounts receivable will include files of patient data, will operate from daily entries of procedures and charges or credits, will age accounts, and will produce statements. It will be easy to operate and will check for operator errors. This software is almost ready for marketing. If you are interested in an accounts receivable program, we recommend you wait for ours. Final tuning is in progress; it is being implemented and tested in a dental clinic now. We will notify you of its completion.

**PRICE: \$75.00**

### **TITLE: ADAMM**

**PUBLISHERS NAME: ENTERPRISE SYSTEMS, INC.**

**DESCRIPTION:** Advanced Automated Materials Management, is one of the most innovative and comprehensive materials management systems available. Designed to meet the demanding needs of today's health care institutions, ADAMM can dramatically reduce labor and materials costs associated with all materials management functions. By automating many time-consuming and costly processes associated with purchase orders, requisitions, patient charging, exchange cart replenishment and inventory control, ADAMM expedites inventory management.

ADAMM is a modular system which allows your institution to choose the materials management elements best suited to meet your needs - from composing, generating and transmitting purchase orders and requisitions to comprehensive recovery of patient charges. The system is available on easy-to-use, stand-alone microcomputers. ADAMM brings reliable, inexpensive and customized materials management systems to today's health care institutions.

**PRICE:**

### **TITLE: AUTOMATED MEDICAL ADMINISTRATOR**

**PUBLISHERS NAME: BOARDROOM EXECUTIVE SOFTWARE**

**DESCRIPTION:** The Automated Medical Administrator is a complete and comprehensive Medical Office Administration system which can help you meet your specific practice's needs.

By subdividing the entire system into a set of separately packaged, but completely integrated modules, we have provided you with the flexibility required to establish a package which meets your needs. You need only purchase those modules which your particular practice requires. This allows you to avoid the aggravations associated with many of today's 'canned software' packages. With the Automated Medical Administrator, there is no need to 'work around' unwanted system 'features', thus saving you both valuable time and money. This unique modular approach also means that you don't have to give up those more specialized features that your practice may require.

#### **\* Patient Accounts**

- Up to 200,000 patients
- Search/Edit by patient number, name, or user-defined field
- Review of account status
  - Patient billing data
  - Balance to date
  - Detail review

#### **\* Automated Billing**

- Complete patient bills

- Third party billing on standard AMA claim forms (modifiable with option) complete with RVS/ICDA codes and diagnosis reporting
- Delinquent accounts by total and/or aged balances
- \* Transaction Recording
- Service posting by user defined procedure numbers
- Private and Third party payments and adjustments
- Delinquent account write-offs
- Generation of printed Superbill, complete with services rendered
- \* Office Administration Reports
- Daily detail, activity by doctor (multi-practitioner), and two additional efficiency reports
- Monthly patient and insurance balances, end-of-month activity by doctor, and partial or complete account updating
- \* Other Features
- Automatic disk initialization routines
- Automated label printing (file folder or mailing list)
- Mixed 40 and 80 column format (with required hardware) for optimal display of information

The BASIC System is a completely menu-driven user-friendly Accounts Receivable package. Our Human factors engineers have developed a systematic approach to data input which makes the system easy to learn and operate. They have also designed a unique 'learning' feature into the programs which allows the package to 'grow' with the user's familiarity with system operation. Hence, as you learn to provide the proper information, the system makes fewer requests of you and responds faster. The package provides everything the practitioner requires to simplify and automate his practice, while improving service to patients and adding efficiency to current office operations. Additionally, the system has the capability to separate and maintain activity on a 'per Doctor per day' basis, thus allowing for effective operations with up to ten doctors in a multiple physician office.

**PRICE: \$1295.00**

**TITLE: CAMP COMP 1**

**PUBLISHERS NAME: CAMP INTERNATIONAL, INC.**

**DESCRIPTION: Medical Billing that can:**

- Create new patient records or change existing records in a matter of minutes.
- Produce a printout with complete information on all your patients - including address, chart number, physician, insurance code and current account balance.
- Automatically print billing statements and insurance forms to speed office cash flow.
- Provide financial information and detailed practice analysis for each doctor in the office at the end of every billing cycle.
- Check the status of any individual patient's account without pulling office charts or even leaving your desk.
- Increase total profits by flexible billing and control over collections.
- Keep receivables from being lost, buried or forgotten.
- Protect receivables transactions through use of an internal security password system.

COMP I features tested, efficient programming developed by computer experts advised by physicians from a number of medical specialties. It is designed to provide you with a better awareness of your practice activity.

**PRICE:**

**TITLE: CARDIO-RESPIRATORY DEPARTMENTAL ANALYSIS**

**PUBLISHERS NAME: CARDIO-RESPIRATORY MANAGEMENT SYSTEMS**

**DESCRIPTION:** This program provides a statistical overview of the administrative/management performance of cardio-respiratory departments. Critical data input includes total revenues, total expenses, total procedures, etc.,. Program provides indicators regarding productivity, revenue/expenses ratio, salary/man-hour ratio, utilization, penetration, and saturation. (Narrative provided).

**PRICE: \$600.00**

**TITLE: CFT'S "HEALTHCARE SOFTWARE PACKAGE"**

**PUBLISHERS NAME: COMPUTERS FOR TODAY, INC.**

**DESCRIPTION: FEATURES:**

1. **PATIENT FILE:** Stores all patient and insured data, account activity and diagnostic information. This program will enable the doctor to:
  - a) add a new patient
  - b) change patient information
  - c) delete a patient
  - d) input diagnostic information
  - e) record visits and payments without the use of the POSTING program
2. **POSTING:** Used to record patients to be seen that day. Charges, payments, appointments, adjustments, etc. are recorded at the time each patient is seen. Maintains current balances on all patients, etc.
3. **DAY SHEET:** Prints out in detail the patients seen that day and all related charges, payments and adjustments. Also prints out an accounts receivable reconciliation and amounts to be deposited in the bank.
4. **UPDATE CATALOG:** Transfers information from PATIENT FILE diskette such as: name, ID number, phone, whether patient is worker's comp. or private and current balance. This information is transferred to the posting diskette to maintain current data on patients to be seen that day.
5. **TRANSFER POSTING:** Transfer data from POSTING diskette to PATIENT FILE diskette. Transfers charges, payments, etc. on patients seen that day onto the patients' permanent files.
6. **UNIVERSAL:** Used to print out universal insurance form for Medicare and for private insurance for all patients which have had account activity since the last billing.
7. **WORKER'S COMP.:** Generates Worker's Comp.. Monthly Report and Bill, and Monthly Supplemental Report for all patients which have had account activity since the last billing
8. **STATEMENT:** Generates statement of charges, payments, adjustments, etc. to be billed directly to patients.
9. **RECALL:** Writes recall notices for appointments on specified dates which were inputted and stored on the POSTING DISKETTE.
10. **LISTING:** Creates alphabetical listing of all patients showing patient name and ID number.
11. **HARD COPY:** Prints, one patient at a time, all data stored on PATIENT FILE diskette onto hard copies.
12. **LETTER:** Allows doctor to write and store letters as he so desires.
13. **GENERAL:** Allows the doctor to perform the following:
  - a) to duplicate patient files onto backup diskette.
  - b) to write letters previously stored on LETTER diskette to patient or insurance company by category such as:

- 1) Birthdate
- 2) Sex



- 3) Age
  - 4) Balance due-e.g. over \$100, \$200, etc.
  - 5) Date of last visit- e.g. patients that have not been in from a specified date
  - 6) Past due- e.g. patients whose accounts are past due 10 days, 20 days, 30 days, etc.
  - 7) Insurance company or type
  - 8) all patients
  - c) to generate patient summaries which includes patients name and address, phone, ID number, employer, insurance type and balance. These summaries can be categorized in the same manner as above.
  - d) to generate doctor summary accounts which list business activity by RVS classification, payments (as cash or other) and adjustments. Also displays doctor's cash account, cash in and withdrawals on a cumulative basis.
  - e) to create labels
14. ACCOUNTING: Generates balance sheets, income and expense summaries by month and year to date, check registers reflecting checks written, deposits and bank balance.
15. WORD PROCESSOR: Allows the doctor to write and store letters; to edit and store paragraphs, etc. for purposes of writing narrative reports and other forms.

**PRICE:**

**TITLE: COMMA - (COMPREHENSIVE MEDICAL MANAGEMENT FOR THE APPLE)**

**PUBLISHERS NAME: SPECTRA/SOFT, INC.**

**HARDWARE REQUIREMENTS: 24x80 Video Card, 3 mini floppy drives, 80 column printer**

**DESCRIPTION:** COMMA is a complete, flexible, yet easy to operate medical management system for practices of up to 9 doctors. Features include total accounts receivable control with variable period aging reports, delinquency notices, daily cash reports, statements, journal and day sheet. Patient accounts can be entered as families or individuals and can be displayed at any time to review current balance and correct aging balances. COMMA also provides complete insurance forms handling with AMA, Blue Cross/Blue Shield, Medicare, Medicaid, Medi-Cal, and Champus forms, printed for interim or period to date transactions. Itemized Super Bill/Universal Claim form can be printed at time of service or at a later date.

Practice management features include daily and period to date reporting of services performed, by doctor and practice and period to date diagnosis analysis. COMMA also features a recall appointment scheduler with recall report mailing notices and labels. User oriented utilities and detailed documentation.

**PRICE: \$1495.00 Floppy System**

**\$1995.00 Hard-Disk System**

**TITLE: DENTAL BILLING SYSTEM**

**PUBLISHERS NAME: PROFESSIONAL MEDICAL SOFTWARE**

**HARDWARE REQUIREMENTS: Corvus hard disk; Epson MX-80 printer**

**DESCRIPTION:** P.M.S. Dental Billing System handles the billing needs of up to three dentists at a fraction of the cost of other systems. The software is menu driven, simple to operate and includes comprehensive documentation. the system handles up to 10,000 active patients and 6,000 transactions per billing cycle. The Billing System prints out the dental Insurance forms and generates an immediate itemized statement at time of service plus



fourteen other reports to keep track of individual accounts. Statements, aging reports, delinquency reports, M-T-D- and Y-T-D procedure code analysis, summaries of revenues by dentist, and mailing labels are some of the reports generated by the system.

**PRICE:**

**TITLE: DENTAL INSURANCE FORM WRITER**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** You can now prepare Universal ADA Insurance Claim Forms on your computer. Each form can be prepared (pre-authorization), saved to disk, reloaded, edited, and then printed (billing) as many times as you desire. Dental Insurance Forms allows rapid billing and claim submittal with a minimum of effort.

A master form can be created for each patient/family and saved for later use. At future visits the master form can be loaded, proposed treatments entered, saved to disk, and then printed as a preauthorization form. Later visits require only the loading, editing (adding dates), saving, and printing of the insurance billing. Print as many copies as you want with the touch of a key. Each diskette will accommodate over 100 families. User definable, up to 10 practitioners, many more features.

**PRICE: \$100.00**

**TITLE: DENTAL SECRETARY**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS:** Two or three disk drives, 130 column printer

**DESCRIPTION:** The Dental Secretary package is tailored to the dental professional, including dental insurance form preparation, and dental records. the system allows the secretary to schedule up to 19,000 appointments, set up a private patient billing system and formulate a set of computer calendars.

With the system it is easy for the secretary to prepare a daily journal of the day's transactions and keep track of all financial information for the filing of claims with dental plans. The system also permits the dentist or dental secretary to locate patients who are due for their regular check-ups. Another element of the system allows the secretary to update patient histories and records, prepare letters, and office forms. A current mailing list of patients may be kept at all times.

**PRICE: \$950.00**

**\$ 55.00 manual available separately**

**TITLE: DENTAL-MEDICAL OFFICE DATA**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** A data base system for physicians and dentists. It consists of thirteen programs in which office and personal information can be entered, deleted, changed, sorted, searched and printed in multiple formats.

**APPOINTMENTS** a listing by day and hour of your office and personal schedule, important dates, and times. Prints out day sheets and other reports.

**PATIENT FILE** a catalog of patients, addresses, phone, payments, etc. Labels, billing, recall and collection options.

**DEAD BEAT FILE** a listing of your most unpopular patients for collection, suits, and no further appointments.

**PHONE LISTS** a catalog of names and phone numbers for quick reference, auto dialing, etc.

**INSURANCE LIST** a file of all the insurance companies, their varied benefits, start dates, contact people and status.

INVENTORY keep track of your stock and supplies. Easy reorder reports and labels.  
CHECKBOOK a check file of your expenses and income.  
INVESTMENTS a listing of your stock, bonds, and other investments, profits and losses.  
EMPLOYEE RECORDS a file of your staff, their addresses, phones, salaries, etc.  
SUBSCRIPTION INDEX a catalog of your many periodicals, costs, and renewal dates. Avoid being double billed.  
LITERATURE a listing of important articles and research in your speciality. Quick reference.  
TEXT EDITOR a letter writing program for reports, papers, patient notes, etc.  
MAIL LIST a program for group or patient mailings.  
FILE TRANSFER transfer your data to other disks or modem.  
DATA BASE create your own data base list. Anything you want, in your own words or titles.  
This disk can be copied for back-up purposes or modified.  
**PRICE: \$150.00**

**TITLE: DENTISTAID (TM)**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** (Micro Computer Managements, Inc.) This dental office management program is designed to streamline all major time consuming tasks performed in the dental office.

DENTISTAID will automatically print standard ADA insurance forms, prequalification and actual services, monthly statements, patient recall notices, accounts receivable aging reports, daily summary of work performed and payments received, daily, weekly, monthly, and yearly totals, production analysis using standard ADA categories and display of individual accounts. One of the primary advantages of DENTISTAID is the simplicity of operation used to increase efficiency through automatic generation of many forms and reports that give the dentist better practice control. This low cost, error-free and operator proof program can be operated by noncomputer persons within hours.

**PRICE: \$1000.00**

**TITLE: DOCTOR'S OFFICE COMPANION**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**HARDWARE REQUIREMENTS:** Parallel/serial acceptable 132 column printer. DOC-2-HD requires 1 Corvus Hard Disk Drive. DOC-2-FD requires 4 disk drives.

**DESCRIPTION:** Doctor's Office Companion provides office efficiency through automation of patient billing, completion of insurance forms, accounts receivable ageing, and account history tracking, freeing the doctor's office from billing drudgery and expense.

Time tested satisfaction

D.O.C. is based on a system that has been operating successfully for over fifty offices. It gives particular attention to insurance billing activities, but also provides other payment types such as cash payment. Patient data is gathered for automatic printing of the HCFA 1500 Universal insurance form, as well as forms required by some states which have not yet adopted the "universal" form. Zero balance billing is supported for those states in which it is required.

Customize to fit your practice

The Clinical Procedure Terminology (CPT) file can be customized by the user so just those CPT codes and descriptions which apply to the physician's practice need be entered, and only one time. On daily patient transactions, the user simply enters the CPT code and D.O.C. prints the corresponding description, thus

minimizing entry time and typing errors. You may also define up to 15 income categories and enter up to 10 "street" accounts. The Corvus version of D.O.C. is designed to support:  
1 to 5 doctors  
2500 transactions per month  
5500 active guarantors  
1000 CPT codes

Facts at your fingertips  
Account information is readily accessible. The "Current Balance Query" gives current, 30, 60, 90, 120 and total balance with the option of including unposted transactions.

Valuable reports by D.O.C. include:

- \* Guarantor List, with or without balance;
- \* CPT List, with codes, descriptions, and price most often associated with the service;
- \* Transaction Analysis, daily and monthly, giving the income totals by doctor and income category, and total charges by service type;
- \* Monthly Ageing Report; and
- \* History Report of all transactions for any guarantor.

PRICE: \$995.00

**TITLE: ELEMENTS OF MEDICAL TERMINOLOGY**

**PUBLISHERS NAME: APPLIED MICROSYSTEMS**

**DESCRIPTION:** A college-level CAI course in medical terminology. This highly interactive course trains the student to build an enormous vocabulary through the assembly of roots, combining forms, prefixes, and suffixes. Twenty lessons allow the student to build an increasingly large vocabulary. Full review of previously-covered terms available at any time. Excellent for health-care students.

PRICE: \$14.00

**TITLE: FRONT DESK MANAGER**

**PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS:** Centronics 739 printer with grappler interface; two disk drive system

**DESCRIPTION:** This software was designed to help the person at the front desk. It gives access to cephalometric analysis, patient work-up, payroll, letter processor, checkwriter, schedule processor, payment scheduler with patient form, and a continuing ed file.

PRICE: \$750.00

**TITLE: MEDICAL BILLING SYSTEM**

**PUBLISHERS NAME: PROFESSIONAL MEDICAL SOFTWARE**

**DESCRIPTION:** Designed by our programmers in close consultation with physicians and accountants. The software is menu driven, simple to operate and includes comprehensive documentation. The system handles over 10,000 active patients and 6,000 transactions per billing cycle. Transactions have automatic RVS look-up. Provides for ICDA or written diagnosis, and generates an immediate itemized statement at time of service plus fourteen other reports to keep track of individual accounts. Statements, aging reports, delinquency reports, M-T-D and Y-T-D service code analysis, summaries of revenues by doctor, and mailing labels are some of the reports generated by the system. The Medical Billing System runs on the popular Apple II Plus computer.

PRICE: \$995.00; Version 1.0- Private Party Billing



**\$1995.00; Version 2.0- Private Party plus Insurance Billing**  
**\$1995.00; Version 3.0- Insurance Billing on a hard disk.**

**TITLE: MEDICAL SECRETARY**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**HARDWARE REQUIREMENTS: Two or three disk drives and a 130 column printer.**

**DESCRIPTION:** The Medical Secretary is a complete administrative package for the medical office. The system includes elements for appointment scheduling, patient registrations, private patient billing, insurance claim preparation and medical record preparation.

The system allows the medical office secretary to keep track of appointments, make appointment follow ups, print daily schedules, enter and locate patient records, enter charges and payments, prepare daily cash journals, prepare private patient bills, prepare insurance forms, print monthly aged accounts receivable's logs, make collections follow ups, enter and update medical histories and records, and prepare such standard text items as referral letters, and report files. The flexible system is expandable to handle an unlimited number of patients and includes all functions necessary for appointment scheduling, billing and general word processing.

**PRICE: \$1000.00 for four diskettes and operating manuals**  
**\$50.00 for manuals**

**TITLE: MEDPAC**

**PUBLISHERS NAME: SMALL SYSTEM GROUP**

**DESCRIPTION:** The MEDPAC System has been designed for: Any Physician or group of up to five physicians with an active patient billing load of up to 24 patients. Any office that is finding the volume of paperwork, insurance handlings, patient information record keeping and office accounting (bookkeeping) growing at a rate faster than the staff can manage. Any physician who is not sure of the practice accounts receivable balance, total number of patients being billed, total number of procedures billing cycle or the total amount of aged accounts receivable (60, 90, 120 days) with an analysis by patient.

The MEDPAC System provides:

Up to 2400 patient information files that contain all necessary information to handle account billing (both self pay and insurance) and the supplemental information to assist in production of AMA 6/74 (Blue Cross type) insurance claim forms. Patient inquiry for balances, aged account balances by patient and total, up to 13 major change groups analyzed by code with quantity by code, income for up to five Doctors, alphabetical and numerical cross reference listings of patients. Full general ledger accounting (P & L, Balance Sheet, Trial Balance and Audit trials).

Hospital patient scheduling system.

Full system diagnostic and backup and a 50 page operating manual. WHY the Apple II computer?

The following were considerations in selecting the Apple:

The Apple Disk provider 116000 characters of storage. After the Disk Operating Systems is removed (10k) the remaining user space is 106K.

The Apple can be operated indefinitely without cooling fans.

The built-in speaker is used extensively to assist operator input (touch typing).

Any device can be used.

Peripheral devices are interfaced to the computer with all



connections made inside the computer. No external expansion device is required.  
Hardware requirements are totally dependent on patient activity. (A two disk system will handle from 1 to 800 patients, great for Specialists). Upward expansion is assured.  
**PRICE:**

**TITLE: MEDPAC/DENTPAC**

**PUBLISHERS NAME: MED DATA**

**DESCRIPTION:** Medpac/Dentpac will handle from 1 to 26 doctors' accounts, and do billing by superbill (1-3 ply) as well as multiple insurance forms. Capacity to 15,000 patients on-line. It holds transactional data for 12 months and then produces a complete account analysis itemizing each and every transaction of both charges and payments. All accounts are for guarantor oriented with itemization for each dependent. Daily audit trail analyzes practice and separates income by doctor, by hospital, or place of origin. It also separates income by type of service, for analysis, and carries running totals of these sources of income. Patients can be listed numerically or alphabetically. Aging of accounts may be broken down into current, 30-60 days, 60-90 days, 90-120 days or over 120 days and outstanding accounts may be listed totally, or by doctor, or by doctor and bill type.

**PRICE:**

**TITLE: PHYSICIANS MANAGEMENT INFORMATION SYSTEMS**

**PUBLISHERS NAME: MEDICAL OFFICE SYSTEMS, INC.**

**DESCRIPTION:**

- Medical Office Systems Inc. offers a sound investment in a micro computer system designed specifically for the medical office.
- The modular design of the system provides you with the capability you need for today and the expansion capability required tomorrow.
- Developed for the Apple computer (the world leader in high quality micro computers) by physicians, MARS and PMIS are designed for easy use by your office staff.
- Full internally produced audit trails provide built-in financial controls and up to date financial information.
- A full instructional operator's manual comes with the system, designed to provide your staff guidance in easy, non-computer language.

**PRICE:**

**TITLE: RESPACCOUNT**

**PUBLISHERS NAME: CARDIO-RESPIRATORY MANAGEMENT SYSTEMS**

**DESCRIPTION:** This program quantifies, on a daily, weekly, and monthly basis, all formal activities conducted by a Cardio-Respiratory Department. Data base is compiled by daily entry of activities, census, and man-hours. Inputs are also available for charge entry and/or revision. Statistics are reported daily, weekly, and monthly. (Narrative provided).

**PRICE: \$500.00**

**TITLE: RESPACCOUNT II**

**PUBLISHERS NAME: CARDIO-RESPIRATORY MANAGEMENT SYSTEMS**

**DESCRIPTION:** Respaccount with utilization indicators provided on weekly and monthly reports. (Narrative provided).

**PRICE: \$750.00**

**TITLE: SCHEDULE PROCESSOR**

**PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS: Centronics 739 printer with grappler interface**

**DESCRIPTION:** This processor lets your receptionist produce multiple quality schedules for your office. Operatory, patient name, procedure, and notation are entered at the quarter-hour prompts.

**PRICE: \$30.00**

**TITLE: SOFT-CHIROPRACTIC**

**PUBLISHERS NAME: SPECTRA/SOFT, INC.**

**HARDWARE REQUIREMENTS: 24x80 Video Card, 3 mini floppy drives, 80 column printer**

**DESCRIPTION:** Spectra/Soft-Chiropractic is a complete, flexible, yet easy to operate chiropractic management system for practices of up to 9 doctors. Features include total account receivable control with variable period aging reports, delinquency notices, daily case reports, statements, journal and day sheet. Patient accounts can be entered as families or individuals and can be displayed at any time to review current balance and correct aging balances. This system provides complete insurance forms handling with AMA, Blue Cross/Blue Shield, Medicare, Medi-Cal, and Champus forms, printed for interim or period to date transactions. Itemized Super Bill/Universal Claim form can be printed at time of service or at a later date.

Practice management features include daily and period to date reporting of services performed, by doctor and practice and period to date diagnosis analysis. The system also features a recall appointment scheduler with recall report, mailing notices and labels. User oriented utilities and detailed documentation.

**PRICE: \$1495.00 Floppy System**

**\$1995.00 Hard-Disk System**

**TITLE: SOFT-DENTAL**

**PUBLISHERS NAME: SPECTRA/SOFT, INC.**

**HARDWARE REQUIREMENTS: 24x80 Video Card, 3 mini floppy drives, 80 column printer**

**DESCRIPTION:** Spectra/Soft-Dental is a complete, flexible, yet easy to operate dental management system for practices of up to 9 dentists. Features include total accounts receivable control with variable period aging reports, delinquency notices, daily cash reports, statements, journal and day sheet. Patient accounts can be entered as families or individuals and can be displayed at any time to review current balance and correct aging balances. This system also provides complete insurance forms handling with ADA forms printed for interim or period to date transactions. Itemized Super Bill/Universal Claim form can be printed at time of service or at a later date.

Practice management features include daily and period to date reporting of services performed, by dentist and practice. The system also features a recall appointment scheduler with recall report, mailing notices and labels. User oriented utilities and detailed documentation.

**PRICE: \$1495.00 Floppy System**

**\$1995.00 Hard-Disk System**

**TITLE: SOFTCARE OVERVIEW**

**PUBLISHERS NAME: PROFESSIONAL BUSINESS SOFTWARE**

**DESCRIPTION:** SoftCare is a series of programs designed to  
**MD-10**

automate the billing and record-keeping functions in a medical office of one to thirty physicians. SoftCare operates on a wide variety of computers, video terminals and printers. Written in UCSD Pascal, the system functions on any computer which supports UCSD Pascal, from all personal computers such as the APPLE to large Digital Equipment Corporation (DEC) mini-computers, with dozens of selections in between. The right size system for your office is dictated by the number of patients records you need to retain on the computer at one time.

The portability of SoftCare means that you can start now with a low cost system that is within your budget. As your needs grow you can add more storage capacity or even change computers without losing your investment in the software or retraining your office staff of a new system. Growth is smooth and orderly. SoftCare may be described most simply as a series of programs which allow you to easily update and prepare reports from comprehensive master files of patient and insurance information. The size of these files is flexible, which allows you to easily add more patients at a later date, without paying for the storage now.

The patient file consists of the individual patient records which contain billing and insurance information. Patients are stored alphabetically in the file. No patient ID number is required, although you have the option to use an ID number if you choose. SoftCare is totally interactive with the user. The fill-in-the-blank screen formats are practically self-explanatory. As the operator enters the information the system checks for correctness and completeness. This way invalid data is not allowed into the system to begin with. Since errors are detected at time of entry, correction of any error is fast because the operator still has the source document in hand, and repetitive errors are avoided.

The unique "browsing" feature of SoftCare lets you quickly and easily page through the alphabetical electronic file of patient records. When you want to query the status of a patient record, simply enter the patient's last name then press the "INQUIRY" key. The patient record is displayed on the video screen instantly. If this is not the patient you requested because of duplicate last names, misspelling, etc., simply browse forward or backward through the file using the "FORWARD" or "BACKWARD" paging key. This is similar to using your manual filing system only infinitely faster when you let your fingers do the walking! The flexible design of SoftCare allows it to work the way you work. For example, assume that your operator is posting cash receipts when there is an immediate need to inquire about another patient and print a demand bill. With SoftCare it is very easy to change from one function to another. There is no need to return to a beginning point of the program (sometimes called the main menu or directory) to change tasks. Simply press the "INQUIRY" key after the patient you want is typed onto the "Patient" screen. To then print the bill for that patient just press the "PRINT BILL" key.

SoftCare produced a complete set of forms and reports as required in a physician's practice. These include: private and insurance bills, aged accounts receivable by patient and insurance carrier, doctor revenue reports, and exception reports for tracking claims.

Reports can be printed at any time, not just on a fixed schedule. For example, the Daily Transaction Register can be generated after the day's activity, or the morning of the next day, or left to accumulate for a period of several days or more. Reports on patients charges, cash flow, or accounts receivable are available any time, not just at the end of a given time period. With this flexibility you can instantly and automatically prepare patient

bills and insurance claims on demand - while the patient is still in your office if you like. Reprinting of a patient's bill or resubmission of a lost insurance claim can be done at the push of a button.

With SoftCare there are no rigid schedules or batching requirements that you must adapt to. This flexibility to easily adapt to your office environment is key to the successful implementation of any computerized system. If the system is flexible, easy to learn and easy to use, it is readily endorsed by your office staff. Their job becomes simpler, not more rigid and complex.

**PRICE:**



## EDUCATION

**TITLE: CIRCULATION-ORGANS**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** Heart, blood, arteries, lungs, etc. functions.

**PRICE: \$29.95**

**TITLE: CIRCULATION-SYSTEM**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** The systemic circulatory and pulmonary systems.

**PRICE: \$29.95**

**TITLE: CLINICAL LABORATORY ANALYSIS SYSTEM I**

**PUBLISHERS NAME: SOFT ONE**

**DESCRIPTION:** This program was developed by a fourth year medical student who had dual undergraduate degrees in Pre-Med and Computer Science.

The program maps blood chemistry values (Na, K, Cl, CO<sub>2</sub>, BUN, Cr, Glu, P, Ca, Alk Phos, LOH, SGOT, Bili, T.P., U.A., Alb, T3RU, T4, ESR, Chol, Triglyc, Fe, and TIBC or any subset of them onto a set of 100 disease states to produce a weighted differential diagnosis of the patient's chemical abnormalities.) Each diagnosis also includes a list of the subset of the patient's abnormal chemistries that is "explained" by invoking the given diagnostic possibility. Derived values such as ANION\* GNP\* A/O ratio, RUN/Cr tation ionized calcium, etc. are computed when applicable and are included in the decision-making process for the generation of the differential diagnosis. Unlike many laboratory diagnostic programs which treat continuous laboratory values in a qualitative or semi-qualitative fashion, this program quantifies the abnormalities of each text in it's analysis. Thus, a BUN of 30 is clearly distinguished by the system from a BUN of 100.

**PRICE: \$99.00**

**TITLE: COMPUTERIZED CLINICAL SIMULATIONS AND CAI**

**PUBLISHERS NAME: MEDI-SIM, INC.**

**DESCRIPTION:** While seated at your Apple II computer you will be taken through a simulated clinical experience. You will gather information about the patient and based on this information you will make decisions and recommendations for the patient's treatment. The format is closely aligned to the National Board for Respiratory Therapy tests thus furnishing excellent practice for the NBRT Registry exams.

**OTHER APPLICATIONS:**

Recruitment incentive by providing a means of study for NBRT exams.

Evaluation for staff up-grade or interservice transfer

Access to unique problems not often encountered

Basis for ongoing staff development program

Proven method of providing individual study incentive

Provide both examination and instructional experiences

**ADVANTAGES TO USING MEDI-SIM COMPUTERIZED CLINICAL SIMULATIONS**

Follow NBRT Format

Free you from costly and cumbersome latent image printing

Can be used repeatedly

Content developed by noted authorities

Save cost of developing simulations "in-house"

Content accuracy is assured

Automatic scoring, score storage and retrieval

Problem content is written by Mr. David Assmann, RRT, ■

nationally noted authority on clinical simulation in respiratory therapy education.

#### **SIMPLE OPERATION**

all MEDI-SIM programs are of "TURN KEY" design. The selected disk is simply inserted in the drive, the computer is turned on and the simulation or computer aided instructional program starts. The learner interacts with the computer using only a few simple typewriter keyboard strokes. Individual scores are delivered immediately along with a printout of the entire program, including questions, responses and scores. The scores are also securely stored on the program disk for retrieval later by any authorized individual.

All MEDI-SIM computer aided instructional programs are furnished complete with written questions, answers, scores and rationale.

#### **CONTENT OF INDIVIDUAL SIMULATIONS:**

##### **VENTILATOR WEANING (#7901)**

(Peter Smith) This simulation involves the care of a cardiac arrest patient in the coronary care unit. It deals with the care and numerous complications of mechanical ventilation and ventilator weaning.

##### **PEDIATRIC ASTHMA (#7902)**

(John James) The patient here is a 10 year old asthmatic. Knowledge of pharmacology and oxygen therapy are thoroughly tested.

##### **COPD (#7903)**

(Ed Sneed) In this simulation we are involved with the care of a COPD patient. Pulmonary function testing and interpretation are stressed. Oxygen therapy and chest physiotherapy are also tested.

##### **CONGESTIVE HEART FAILURE (#8001)**

(Patricia Michaels) Here we are involved with the care and treatment of a congestive heart failure patient who suffers a cardiac arrest. Cardiopulmonary resuscitation and the identification and treatment of various ECG tracings are tested. Appropriate drug and oxygen therapy is also involved.

##### **BURN PATIENT (#8002)**

(Ann Simpson) The subject of this simulation is the care and treatment of a burn patient. Fluid and electrolyte balance as well as oxygen and ventilator therapy is stressed. Blood gas interpretation, with emphasis on acid/base balance is also covered.

##### **MYASTHENIA GRAVIS (#8003)**

(Rhonda Eaton) This simulation involves the care of a patient with myasthenia gravis. Recognition and care of progressive neuro-muscular disease is tested. Decisions concerning continuous mechanical ventilation are also tested.

##### **COPD - HOME CARE (#8004)**

(John Drew) This is a COPD patient and the simulation is involved with pulmonary function and home care procedures.

##### **DRUG OVERDOSE (#8005)**

(Jack Robbins) Here we are involved with the care and treatment of a drug overdose patient. Knowledge of important laboratory data, oxygen therapy and ventilator therapy are tested.

##### **NEONATAL (#8006)**

(Brian Disney) the care and treatment of a premature neonate form the subject matter for this simulation. In addition to arterial

blood gas interpretation, CPAP and oxygen therapy are also tested.

#### **CHEST TRAUMA (#8007)**

(Bill Johnson) This simulation deals with the treatment of an automobile accident patient with severe chest trauma. Identification and treatment of pneumothorax and shock lung is tested.

#### **RENAL FAILURE (#8008)**

(John Hall) the content of this simulation involves the care and treatment of a post-operative open heart surgery patient. Electrolyte balance and respiratory physiology, along with ventilator therapy including IMV and weaning is emphasized. Low oxygenation and the use of PEEP is also tested.

#### **POST OP PNEUMONIA (#8009)**

(Raymond Sullivan) In this simulation we deal with the care and treatment of a post-operative patient who develops pneumonia and eventually renal failure. Oxygen therapy, chest physiotherapy, and respiratory care procedures are tested.

#### **FORMAT**

All MFEDI-SIM computer aided instruction programs are designed to operate on APPLE computer systems. They can be owner revised to operate on other compute systems. Contact us for complete details.

We will answer any question you have concerning your computer's compatibility with our programs.

NOTE: Nursing Programs in CAI available for credit. Emergency Medical Tech Programs also available.

#### **PRICE: MEDI-SIM PROGRAMS**

##### **COMPUTERIZED CLINICAL SIMULATIONS**

Individual Problems.....\$200.00

Set of 12 Problems.....\$2000.00

##### **COMPUTER AIDED INSTRUCTIONAL PROGRAMS**

Programs..... \$200.00

Set of 10 Programs.....\$2000.00

#### **TITLE: MICROCOMPUTERS AND PHYSIOLOGICAL SIMULATION**

**PUBLISHERS NAME: ADDISON WESLEY PUBLISHING CO.**

#### **DESCRIPTION:**

This book provides microcomputer hardware and programs suited for teaching simulations such as nerve action potential, cardiac action potential, cardiovascular system mechanics, and the glucose tolerance test.

"Sorely needed for those of us who are just beginning to adapt microprocessors to teaching applications in Physiology. Dr. Randall is eminently qualified to do this special job. He has interacted for several years with his potential readers through his activities in the American Physiological Society." Fe. 1980, 250 pp. illus. Paper 06128

**PRICE: \$14.50**

#### **TITLE: MISC. PROFESSIONAL DISK**

**PUBLISHERS NAME: ANDENT**

#### **DESCRIPTION:**

**ALCOHOLIC TEXT** - Test yourself and family/friends for traits of this serious disease. Are you a potential alcoholic.

**HEART ATTACKS** - medically test your chances for heart problems. Input habits, sex, diet, family history, etc.



**INTEREST PRINT** - compute and bill interest on your accounts due.  
A great money maker.

**SUBLIM** - flash variable messages on the monitor screen so rapidly that the viewer is influenced on a sub-conscious level.  
Subliminal suggestion is very effective in promoting sales, learning, ego strengthening and behavior modification.

**LABEL MAKER** - a program that will allow the user to print any number of labels in any configuration. Uses no files...is very quick.

**PRICE: \$20.00**

**TITLE: PROFESSIONAL DISK**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** ALCOHOLIC TEST - test yourself and family/friends for traits of this serious disease. Are you a hidden alcoholic.

**HEART ATTACKS** - medically test your chances for heart problems.  
Inputs sex, habits, diet, family history, etc.

**INTEREST PRINT** - computer and bill interest on your accounts due.  
A great money maker.

**SUBLIM** - flash variable messages on the monitor screen so rapid that the viewer is influenced on a sub-conscious level.  
Subliminal suggestion is very effective in promoting sales, learning, ego strengthening and behavior modification.

**PRICE: \$20.00**

**TITLE: REPRODUCTION ORGANS**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** Principal male and female organs functions.

**PRICE: \$29.95**

**TITLE: REPRODUCTION-PROCESS**

**PUBLISHERS NAME: MICRO POWER & LIGHT CO.**

**DESCRIPTION:** The making of a new person- from copulation to birth.

**PRICE: \$29.95**

**TITLE: THE DIGESTIVE SYSTEM**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Digestive system, structure, identification, processing, absorption, hires, color graphics, byproducts.

**PRICE: \$29.95**

**TITLE: THE HEART**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**DESCRIPTION:** Circulation, blood flow structure, chambers identification, detailed color graphics, heart attack causes.

**PRICE: \$29.95**



## TREATMENT/DIAGNOSTIC

### **TITLE: ABG QUALITY CONTROL**

**PUBLISHERS NAME: CARDIO-RESPIRATORY MANAGEMENT SYSTEMS**

**DESCRIPTION:** This program quantifies the results of three-level quality control titrations from blood gas analyzers. Critical input for data base per run includes nine values derived from all three levels of titration. The program logic will accept nominal standards from any three level system. A printed report can be produced based on values from at least 2 runs but not over 30 runs. All runs are presented graphically against a range of  $\pm 2$  standard deviations. A synopsis of each parameter of each level is produced which reports observed range, mean, standard deviation, standard error, and 95% of confidence limits. Also reported are nominal mean, nominal standard deviation, and difference between nominal and observed values. Additionally, the program provides troubleshooting guides via CRT for possible measuring abnormalities.

**PRICE:**

### **TITLE: ABG STERILIZATION**

**PUBLISHERS NAME: CARDIO-RESPIRATORY MANAGEMENT SYSTEMS**

**DESCRIPTION:** This program provides storage and retrieval capabilities for up to 1000 ABG samples. Retrieval modes include name, identification number, date, or first letter of name. (Narrative provided).

**PRICE: \$150.00**

### **TITLE: ALCOHOLIC TEST**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** Test yourself and family/friends for traits of this serious disease. Are you a potential alcoholic.

**PRICE: \$20.00**

### **TITLE: ARTERIAL BLOOD GAS INTERPRETATION**

**PUBLISHERS NAME: CARDIO-RESPIRATORY MANAGEMENT SYSTEMS**

**DESCRIPTION:** This interpretive program for blood gas/acid-base analysis was developed and written by two medical doctors (an internist, pulmonologist). Critical input includes patient age, inspired oxygen fraction, pH,  $\text{PaCO}_2$ , and  $\text{PaO}_2$ . The program calculates an alveolar-arterial oxygen gradient, bicarbonate level, and oxyhemoglobin saturation. The subsequent interpretation of the blood gas values is printed in sentences and provides a broad spectrum of possibilities. Serialization of the patients' previous blood gases occurs automatically after each interpretation. This menu-driven program also allows direct access to stored information, by-passing the interpretive program.

**PRICE:**

### **TITLE: CEPHALOMETRIC ANALYSIS**

**PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS:** Centronics 739 Printer with Grappler Interface

**DESCRIPTION:** This program is designed to interpret head film. It generates and saves a graphic tracing, linear measurements, angles, an optical soft tissue tracing, and an optional opinion. Mount the radiograph on your video screen and input the points directly with the Apple paddles, or if you prefer, points may be input after transferring them onto graphic tracing paper. The

computer does the rest. A quality printed copy is produced for the patient's chart.

The minimum package includes the following angles: NP-P, NAP, SN-GOGN, SGN-F, SNA, SNB, ANB, 1/-/1, /1-GOGN, and 1/-SN; and the following linear measurements: PORIOIN, NP, SN, NA, SGN, AP, and GOGN.

**PRICE: \$450.00**

**TITLE: HEART ATTACKS**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** Medically test your chances for heart problems. Input habits, sex, diet, family history, etc.

**PRICE: \$20.00**

**TITLE: HYPNOSIS**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** An aid to suggestive relaxation, behavior modification and trance induction. HYPNOSIS utilizes photo-optic and acoustic sensory stimulation to induce and potentiate hypnotic states. It is designed for professionals and students of the medical, psychological and social sciences. Fully variable - 48,000 settings. Manual included.

**PRICE: \$20.00**

**TITLE: MEDICAL DATA DIAGNOSTICS (MDD)**

**PUBLISHERS NAME: CARDIO-RESPIRATORY MANAGEMENT SYSTEMS**

**DESCRIPTION:** A collection of interpretive clinical and management programs written specifically for cardio-respiratory departments. All programs are available in Apple Basic on 5 1/4 inch floppies. All programs require 48K.

**PRICE:**

**TITLE: MICROLOOP**

**PUBLISHERS NAME: MANNEE MEDICAL, INC.**

**DESCRIPTION:** A complete hardware and software package to do pulmonary function testing and arterial blood gas determinations for the hospital, clinic, or industry. MicroLoop utilizes a 48K Apple Computer, 9" Sanyo CRT, 40 column terminal graphics printer and additional instrumentation to make up a mobile compact unit. The software meets and exceeds A.T.S., OSHA, Federal Disability and Federal cotton dust standards. It provides a high speed sample rate, high speed digital integration for extreme accuracy. The system executes back extrapolation for FEV1, and other timing calculations. The package also contains an on-line real/time graphic display of VT, SVC, IC, ERV, MVV and flow volume loops pre and post bronchodilator. Graphic presentation of data in the final report format is included, as well as choice of predicted normals for adults, adolescents and pediatrics.

**SOFTWARE**

- \* Transmission software to send data to base site for interpretation
- \* Pulmonary function interpretation
- \* Blood gas entry and interpretation
- \* Custom final report format
- \* FRC
- \* DLCO
- \* N2 studies
- \* Body plethysmography automation
- \* A world of Apple Computer compatible programs including Management, Statistics, Word Processing, Bookkeeping and

Billing.  
PRICE:

**TITLE: NUTRIONICS METABOLIC MANAGEMENT SYSTEM**

**PUBLISHERS NAME: PROFESSIONAL COMPUTER SYSTEMS**

**DESCRIPTION:** This unique system analyzes Insurance-approved Urine & Blood Test Results as well as Vital Signs and Stress Questionnaire, provides a list of possible symptomatology, gives a physiological profile, and suggests a diet and nutritional supplement regimen to help balance the body's metabolic Chemistry. Useful for Primary Health Care Physicians, Health Clinics, Health Retreats, Nursing Homes, and Weight Loss Clinics.

**PRICE: \$1.00 per Test (200 minimum)**

**\$700.00 for Urine Analysis Equipment**

**TITLE: PATIENT WORK-UP**

**PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS: Centronics 739 printer with grappler interface**

**DESCRIPTION:** Simply input the positive factors, the problems, and the recommended treatment, and a finished copy of the treatment plan is ready for consultation and filing in the patient's chart. This program features automatic computation of the patient's age and easy editing of your entries. All data is stored on disk for fast recall.

**PRICE: \$30.00**

**TITLE: PULMONARY FUNCTION SPIROMETER**

**PUBLISHERS NAME: VITALOGRAPH MEDICAL INSTRUMENTATION**

**DESCRIPTION:** Interfaces an Apple with Vital-o-graph Spirometer after entering patient data and all clinical information via Apple keyboard. Performs the test maneuver and automatically calculates measure, displays a full range of volume data. Patient studies may be stored and recalled from disk. Numerous pulmonary function reports may be output to printer for hard copy. Simple to use, inexpensive pulmonary function testing system for physicians office, clinic, hospital, or industrial use.

**PRICE:**

**TITLE: PHYSICAL EXAM**

**PUBLISHERS NAME: PROFESSIONAL MEDICAL SOFTWARE**

**DESCRIPTION:** Uses a combination of constant values, and a format which when filled out will print a report for the patient. The Default section is for stating the physician's "normal" descriptions for up to 50 organ systems. This really covers almost any part of the body that is required for a physical exam by insurance companies, government agencies, private corporations, small and large companies, and health and education related professionals and organizations. The format in the Physical Exam is simple and ingenious: the names of the patient, chart number, date of birth, sex, age, blood pressure, temperature, pulse, respiratory rate, weight, and height are logged.

**PRICE:**

**TITLE: SPIROMETRY INTERPRETATION**

**PUBLISHERS NAME: CARDIO-RESPIRATORY MANAGEMENT SYSTEMS**

**DESCRIPTION:** This interpretive program for spirometric  
MD-19

evaluations was developed and written by two medical doctors (an internist, pulmonologist). Critical data input include patient age, race, height, FVC,  $FV_{1.0}$ , and FMF. The program calculates a  $FEV_{1.0}/FVC$  (%). For pre- and post-bronchodilator values, the program provides assessment of response. As with the blood gas program, the interpretive information is formatted in sentences and provides for multiple possibilities and etiologies. In the screening mode, the program assesses pre-operative pulmonary status of the patient.

Serialization of the patients' previous spirometric values is automatic after each interpretation. The program is menu-driven and allows direct access to stored information, by-passing the interpretive program.

**PRICE:**

**TITLE: SPIROSOFT SYSTEM ONE**

**PUBLISHERS NAME: CHESTECH CORPORATION**

**DESCRIPTION:** Computerized spirometric testing that gives you all the information you want. When you want it. Whether you're interested in simple screening or flow volume loops, Spirosoft System One by Ches Tech is designed for respiratory testing. And for your convenience.

- Easy to operate
- FVC, FEV, MVV
- Fast, accurate calculations
- Indicates the completion of properly performed tests
- Well documented ready-to-file patient report
- Reports best values using industrial prediction equations
- Meets or exceeds Federal Cotton Dust and American Thoracic Society standards
- Portable for easy field use
- U.L. listed

For everything from basic testing to storage and analysis of multiple results, Spirosoft System One is perfect for fast understandable medical documentation. Plus it gives you the flexibility you need. You can even use it for your word processing and inventory control. To automate your industrial testing, look for the fast, easy and accurate solution. Spirosoft - A quality trademark of ChesTech Corporation.

**PRICE:**



# MUSIC/SOUND RELATED

ALPHA 2 . . . . .	MU-1
ALPHA SYNTAURI . . . . .	MU-2
AMD - THE ASSISTANT MUSIC DIRECTOR . . . . .	MU-2
APPLE MUSIC . . . . .	MU-3
APPLE MUSIC I - 9 VOICES . . . . .	MU-3
APPLE MUSIC THEORY . . . . .	MU-3
APPLEODIOC . . . . .	MU-4
APPLESACK 6 - MUSIC & GRAPHICS . . . . .	MU-4
DIGISONG PAKS . . . . .	MU-4
DOUBLE ALBUMS . . . . .	MU-5
INTROL SUPER VOICE . . . . .	MU-5
MICRO COMPOSER . . . . .	MU-5
MIMIC SPEECH PROCESSOR . . . . .	MU-6
MULTIMUSIC . . . . .	MU-7
MUSIC BOX . . . . .	MU-7
MUSIC II . . . . .	MU-8
MUSICOMP . . . . .	MU-9
NAME THAT TUNE . . . . .	MU-9
NOTEWRITER . . . . .	MU-9
SINGLE ALBUMS . . . . .	MU-10
SONGS IN THE KEY OF APPLE . . . . .	MU-10
SOUNDCHASER . . . . .	MU-10
SOUNDWARE MUSIC BOX . . . . .	MU-11
THE ELECTRIC DUET . . . . .	MU-12
THE V100 INTERACTIVE VOICE SYNTHESIZER . . . . .	MU-12
THE VOICE . . . . .	MU-12

**TITLE: ALPHA 2****PUBLISHERS NAME: SYNTAURI**

**DESCRIPTION:** The "Apple Music II" is a simple music synthesizer with price and performance designed for the hobby market. With a suggested list price of only \$195.00 (\$21.67 per voice), this synthesizer is easily one of the lowest priced synthesizers of its class. Although the synthesizer is somewhat limited by the necessities of economics, each feature available as been exploited virtually to the limits of the hardware and of the Apple II computer it plugs into.

The synthesizer consists of a circuit card, an audio output cable, software on tape or disk, and an owner's manual. (The manual is available separately for product evaluation, see details in this section.) The circuit card is designed to plug into an Apple II computer (manufactured and sold by Apple Computer Inc.), and the audio output cable connects to this card and to a home stereo system. The software tape or disk contains programs which are loaded into the Apple. These programs are used to easily enter songs from sheet music and play them back. The circuitry of the synthesizer consists of nine nearly identical "channels." Each channel can produce about a thousand different pitches, ranging from about 62.5 Hz to about 64,000 Hz. The software allows production of a 7 octave range which starts at the lowest C on a standard piano. The pitch can be produced at any of 16 volume levels, which increase exponentially. Nine independent pitches can be played at once. When using a stereo sound system, three voices are heard on the Left, three voices in the Middle (on both Left and Right), and the remaining three voices are heard on the Right. One voice from each stereo position can either produce normal tones, or can be used to create "white noise" percussive effects.

The programs provided allow for the convenient entry of songs from standard sheet music, and for song playback. Notes can be entered for the 7 octave range. Whole notes through sixty-fourth notes (plus dotted and triplet notes) can be entered and tied to other notes. Entered notes are shown on a television display in standard musical form. Typing is minimized by an interactive graphics system which uses the two rotary knobs of the Apple computer to select note types and positions on a treble and bass staff. Errors made during entry are easily detected since each pitch is played by the synthesizer as it is entered, and measure bars are automatically drawn at the correct places. Key signatures are easily specified, and notes entered are automatically corrected for the current key.

Once entered, songs can be saved on cassette tapes or on disk (if the Apple is equipped with a DISK II). Since the song is written on the tape or disk in a special digital format, there is no degradation of sound quality. Each performance sound exactly like the first. Corrections and additions can be made at any time. Songs entered by ALF and by other ALF synthesizer owners are available in this digital format in our ALF ALBUM tape and disk series. Songs entered for the 10-5-16 Apple Music Synthesizer can also be played back on the 10-5-1 Apple Music II. Differences between the Apple Music Synthesizer and the new Apple Music II are as follows. **TUNING ACCURACY:** The AMS has excellent tuning accuracy (within 2 cents over 8 octaves) whereas the tuning accuracy of the AM II is reduced (worst case for half-tones is 33 cents in the top octave, but accuracy increases in the lower octaves to a worst case of about 1.5 cents). The AMS can produce about 65,500 different pitches whereas the AM II can produce 1,023 pitches. **FREQUENCY RANGE:** The AMS has an 8 octave range starting at 27.5 Hz (the lowest note of a piano). The AM II has a 7 octave range starting 3 half-tones higher. **VOLUME CONTROL:** The AMS has a 78 dB volume span with 256 exponential

levels (similar to 8,160 liner levels). The AM II has a 28 dB volume span with 16 exponential levels (similar, but AMS envelopes are smoother since the AMS has 256 volume steps to the AM II's 16. AUDIO OUTPUTS: Both are designed for use with a customer-supplied amplifier and speakers (stereo system). The AMS has stereo when two or three cards are used; the AM II has stereo outputs. NUMBER OF VOICES: The AMS has 3 voices per card and 3 cards can be used for a maximum of 9 voices. The AM II has 9 voices and only one card can be used. SOFTWARE: ENTRY and PLAY are similar for both synthesizers. The AM II has a "FUZZ" command for white noise control and does not need a distinction between STEREO:2 and STEREO:3. (There are other small changes as well.) The AM II is not provided with an INTRODUCTION program or the CHROMA subroutine.

**PRICE: \$265.00 AMS**

**\$88.33 Per voice**

**TITLE: ALPHA SYNTAURI**

**PUBLISHERS NAME: SYNTAURI**

**DESCRIPTION:** The alphaSyntauri musical instrument was designed by Charlie Kellner to be a musical tool for performing, education, and composing. The hardware is deliberately simple: the software is modular and flexible - and is the heart of the alphaSyntauri system.

How does it work? Your Apple computer looks at the alphaSyntauri keyboard every five milliseconds. When it sees a key depressed the software running on the Apple sets up note control information for the sound synthesizer board(s). The software then follows the note through, updating the control signal every five milliseconds according to the parameters preset for the note.

Parameters over which you have control are the envelope (note loudness over time), the octave range, the note percussion, vibrato, and sustain. The timbre (or instrument) which you hear is created when you manipulate the envelope's six sections. You can specify tone qualities ranging from a smooth legato to percussive effects which defy analogy to conventional instruments.

The alphaSyntauri operating system requires no more than six Kbytes of space. Each preset (envelope parameter) needs 32 bytes or storage, and each note stored uses no more than 4 bytes. A 48K Apple can store over 7000 notes in RAM during a typical record/playback session.

What equipment do you need? A 48K Apple II or Apple II Plus, a disc drive, a color CRT, and two ALF (Apple Music Synthesizer boards) are basic equipment. You will also need a stereo or mono amplifier and speaker(s). Headphones are handy, too, for practice sessions. A rugged shipping/carrying carton comes with every alphaSyntauri. You musical instrument is as portable as your computer!

**PRICE: \$1295.00**

**TITLE: AMD - THE ASSISTANT MUSIC DIRECTOR**

**PUBLISHERS NAME: MEDIA SERVICE CONCEPTS**

**DESCRIPTION:** "MUSIC SCHEDULER" provides a fast way to plan rotations for current music lists.

"THE REPORTER" lets you compile retail sales and trade reports via computer.

"REQUEST" quickly tabulates music request, then sorts them by caller demographics.

"FORMAT" enables you to plan music with a color graphic clock hour wheel.



"SEQUENCE" is a music formatter designed for stations that prefer continuous sequence systems.

Your Assistant Music Director can make life a lot easier. It will help you with the routine tasks that now consume time. And it will offer added flexibility and insight.

Now you can enter retail store and trade information directly to the microcomputer system. Determine the weighting for each store, then run different reports arranged the way you want them. With this package it is easy to Keep tabs on music requests. And you can try out different music mixes on computer - using either a clock hour wheel or continuous music sequence - before they hit the air.

**PRICE:**

**TITLE: APPLE MUSIC**

**PUBLISHERS NAME: ALF PRODUCTS**

**DESCRIPTION: SIMPLICITY**

Most Music systems make you memorize octave numbers and cryptic note codes like QFS3. With the graphics based system invented by ALF, you just position notes on the screen with the game paddles.

**ADVANCED FEATURES**

With ALF's Entry Program, you can quickly and easily insert, change, and delete notes; add new parts (up to nine); change time and key signatures; repeat sections or make "rounds"; and change sound parameters at any point in the song.

**QUALITY**

ALF has been selling personal computer synthesizers longer than anyone else. We won't settle for anything less than top quality.

**HARDWARE**

Our three-voice (model 10-5-16 synthesizer was the first Apple compatible music product and is still the most advanced music synthesizer available for the Apple II computer. It simply plugs into your Apple and your home stereo system-complete integer BASIC software is provided (Applesoft version available at slight extra cost).

**PRICE: \$265.00**

**TITLE: APPLE MUSIC I - 9 VOICES**

**PUBLISHERS NAME: ALF PRODUCTS**

**DESCRIPTION:**

**PRICE: PROCESS - Advanced editing functions - \$49.95**

**ALBUM 1 - 16 songs - \$14.95**

**ALBUM 2 - 12 songs - \$14.95**

**ALBUM 3 - 12 songs - \$14.95**

**APPLE MUSIC II - demo record - \$1.00**

**BASIC EAR-TRAINING SKILLS - for the AMS - \$49.95**

**TITLE: APPLE MUSIC THEORY**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Apple Music Theory is a series of clever programs that make it interesting to learn music fundamentals. Developed for Apple by music teachers from the Minnesota Educational Computing Consortium (MECC), the programs use the superb graphic and sound capabilities of your Apple II or Apple II Plus to generate tones and display "sheet music" on a video monitor. Because you can both hear and see the music, as well as repeat and practice lessons easily, you can quickly learn what otherwise might take dozens of private lessons to master.

Designed for teenagers and up, Apple Music Theory is an excellent teacher, whether you're starting from scratch or simply reviewing forgotten concepts. The programs provide challenging drill and



practice exercises for scales, chords, sharps and flats, half-tones, intervals, and other music elements. Apple Music Theory also keeps track of performance, so you can identify weak areas and gauge your progress.

Apple Music Theory is the perfect teaching aid for anyone interested in grasping music fundamentals - from the child who is just beginning to learn, to the adult who simply wants a refresher course.

#### APPLE MUSIC THEORY

- \* Frees you from music lesson appointments, by providing personalized drills that always fit your schedule...
- \* Allows you to progress at your own pace, because you can determine the length and intensity of the lessons...
- \* Free music instructors to work with individual students, by providing an "assistant" that handles drill and practice exercises for the whole class.

Imagine having a private music tutor at your beck and call. That's what Apple Music Theory is: an "instructor" that's available whenever you are.

Apple Music Theory lets you learn at your own pace, at home or in a classroom. And anyone can use it easily. Just insert the program diskette into your disk drive, turn on the system, and "class" begins.

The programs provide fundamental exercises in aural intervals, counting, enharmonics, key signatures, naming notes, note types, visual intervals, music terms, halves, rhythm, scales, sevenths, triads, and whole and half-step intervals.

Your Apple II or Apple II Plus generates clear tones and passages of music that demonstrate a wide range of music concepts. Bars of music are displayed on your screen, exactly as they would appear on a sheet of music. By matching the notes and other music symbols with their corresponding sounds you can quickly learn to read and "hear" music, so that you can interpret both played and written passages.

Whether you're considering it for your school, your child, or yourself, Apple Music Theory provides a truly convenient and effective way to learn music fundamentals.

PRICE.

#### TITLE: APPLEODIOC

PUBLISHERS NAME: RAINBOW COMPUTING

DESCRIPTION: Allows you to save to tape or disk and compose and enter your own songs. Includes 3 Bach fugues

PRICE: \$10.00; Tape

\$15.00; Disk

#### TITLE: APPLESACK 6 - MUSIC & GRAPHICS

PUBLISHERS NAME: COMPUTERMART

DESCRIPTION: Contains over 30 programs. There are 10 songs that range from Bach to Hi-Fi music. Even has a tune with two voices. There are 12 Hi-Res pictures, shapes and demos. You also get 9 Lo-Res pictures and programs. Some of the titles include: 3-D, Rotation, Hi-Res Art, Pictures, Graphs, Color Generators, Bounce, Bank, Old Glory, Figures and many more.

PRICE: \$24.95

#### TITLE: DIGISONG PAKS

PUBLISHERS NAME: MICRO MUSIC, INC.

DESCRIPTION: Disk albums of music especially arranged for the MUSIC COMPOSER system. Each DIGISONG PAK contains 10-20 selections. PAKS currently available include: Dixieland

Swingers Oldies-But Goodies, J.S. Bach Sampler, Hymn Favorites, MMI Disco, and Christmas Pak.

**SPECIAL FEATURE:** In addition to the music, the Christmas Pak includes six colorful Christmas scenes with printed Christmas messages. This can easily be programmed to personalize the messages for you family and guests.

**PRICE: \$19.00**

**TITLE: DOUBLE ALBUMS**

**PUBLISHERS NAME: ALF PRODUCTS**

**DESCRIPTION:** ALF's Double ALBUM Series are disks of pre-programmed songs for Music Card MC1 and MC16 owners; each has two disks of songs. Albums 7 and 8 require three MC16 cards, albums H and I require one MC1 card. Album 7/H has 10 songs programmed by Antone Walloch, M D Pink Panther, Sweet Georgia Brown, Honky Tonk Train The Nearness of You, When Your Lover has Gone, Up a Lazy River No Moon At All, Baubles, and Bolero. Album 8/I has 11 songs programmed by Michael Abelson: William Tell, Brandenburg II, Marriage of Figaro Sabre Dance, Carmen Suite, Comedian's Galop, Polovetsian Dances I, Polovetsian Dances II and Mars (from "The Planets").

**PRICE: \$24.95**

**TITLE. INTROL SUPER VOICE**

**PUBLISHERS NAME: MOUNTAIN HARDWARE**

**DESCRIPTION:** Voice control/Graphic Response See Super Talker in Peripherals section.

**PRICE: \$50.00**

**TITLE: MICRO COMPOSER**

**PUBLISHERS NAME: MICRO MUSIC, INC.**

**DESCRIPTION:** An Apple II compatible, low cost music system designed by the folks at MMI for music lovers and students alike. If you thought player pianos were fun, just try MICRO COMPOSER software/hardware package that turns your Apple into an instant player computer. Instead of paper music rolls, we've got DIGISONG PAKS for all styles of music. If you've the urge to compose your own songs to play, you can use the MICRO COMPOSER's simple music entry system. The music software was designed by leading experts in music education and has been well tested in the classroom. A simple step-by step instruction manual leads you through entering, displaying, editing, and playing music with up to four voices - soprano, alto, tenor, and bass. You can change the sound of each voice to reed, brass, string, or organ sound and you can even color your music sounds. The MICRO COMPOSER LETS you...PLAY up to 4 simultaneous VOICES. See all 4 voices at the same time you're hearing the music - a must for music editing. Enter music notes by a fast simple and well tested coding system. The COMPOSER is smart. It tells you when you've entered a wrong code and keeps track of rhythmic durations. Program the Pitch, Rhythm, and Timbre of the music. The Tempo is varied by the Apple paddle. Choose 7 different tone colors for each voice of Create your own tone color. Compose, Edit Display, and Play music through an interactive, command-driven language that's easy to learn. Save your Music on disk or cassette. Hear quality music sound at low cost through the APPLEDAC music card. It's fun. The MICRO COMPOSER comes complete with an instruction manual, software disk (or cassette), and the Appledac music card. Just plug the Appledac into the Apple expansion slot and connect the audio cable to an 8 ohm speaker. To play your favorite tunes.

DIGISONG PAKS are available with music from Back to Dixieland. Pitch is a 4-octave range of 25 equal-tempered chromatic steps (65.1 Hz to 1046.5 Hz). Rhythm - The rhythmic durations are whole, half, quarter, eighth, sixteenth, and thirty-second notes and their dotted values. Coding System - A literal music code is used. For example, HGS2 is a dotted half note, G-sharp in the second octave. A QR is a quarter rest. The software checks all input for legal codes. Voices - music with 1,2,3 or 4 polyphonic voices may be entered into the COMPOSER. Music Entry - Music is entered in vertical sound sets. A music set represents one time unit equivalent to the smallest note value in the music. Each set contains all of the rhythm and pitch information needed during the time unit. With 4 voice music, 744 music sets may be stored in the 8K memory reserved for the music. Tempo - Tempo of the music is controlled by the Apple Paddle #0. Timbre - The COMPOSER has 7 present timbres; rich string, wind-flute, brass, oboe-bassoon, clarinet, electronics organ, and funky oboe. The COMPOSER provides features for constructing and saving your own timbres. The timbres are limited to 16 harmonics and restricted to frequencies below 5Kz. Commands - The COMPOSER is command-driven. The double-question mark ??, is the prompt for a command. The single-question mark, ?, is the prompt for data. The commands available are Play, Display, Compose, Edit, Fourier, Voices, Meter, Timbre, Read, Write, Help, and Quit. Editing - The COMPOSER permits quick editing of any set. In the edit mode the stored music set is displayed as well as the new music set being entered. The button on the Apple Paddle #0 lets you stop and start the music at any point. With the button depressed pushing the space bar on the keyboard returns you to command mode. Appledac Music Board This digital-to-analog converter permits quality musical tones with a computer at low cost. Four simultaneous tones can be generated with this board and accompanying COMPOSER software. Tones are generated using a sampling technique and waveform tables stored in memory. 32K Apple required for cassette based system and 48K for the disk based system.

**PRICE: \$179.00 (Specify disk or cassette version)**

**TITLE: MIMIC SPEECH PROCESSOR**

**PUBLISHERS NAME: MIMIC, INC.**

**DESCRIPTION:** Mimic Electronics' MIMIC Speech Processor is a low cost multi-purpose audio signal processing unit. The system converts an audio signal (typically a speech signal) into a digital bit stream which can be sampled by a computer, stored, and played back through the system. A data rate of 9600 bits per second produces speech quality and intelligibility acceptable for most applications. This means, for example, that a 400-word vocabulary for computer speech output can be stored on one side of a single density 8-inch floppy disk, the average word duration being .5 sec. Similarly, the sixteen hexadecimal digits, "zero" through "F", can be spoken from the data stored in only 8 kilobytes of RAM or ROM, the average word duration for these digits being .4 sec. The speech storage memory need not be high quality, and slow memory chips or ships with a few random bit failures can be used. Thus, for limited vocabularies, the MIMIC Speech Processor is the lowest cost computer speech processing system available. Applications include: automatic word recognition by computer (using software pattern matching against stored speech samples), two-tone telephone signal encoding and decoding, alert "beeper", sound effects, playing musical tunes, metronome, rhythm generator, and tuning or practice aid for musicians. The MIMIC Speech Processor is available in packages ranging from complete ready-to-use systems for a variety of



computers to bare boards for user assembly.

**FEATURES:**

1. Single supply operation
2. Reverse voltage protection.
3. Easy-to-interface TTL signals for I/O which connect directly to a parallel I/O port on most computer systems.
4. No user adjustments.
5. Audio output short circuit and thermal overload protection.
6. On-board audio input jack provided.
7. Full-duplex operation.
8. On-board LED indicates when digital output is active.
9. Does not require expensive microphone or expensive speaker for operation.
10. I/O connector reversal protection.
11. On-board voltage regulator system and decoupling capacitors.

**SPECIFICATIONS (for the MIMIC Speech Processor):**

1. 3 inch by 5 inch fully assembled and tested printed circuit board.
2. Audio input jack: miniature phone jack.
3. Audio input impedance: 1,000 ohms (use of a low-impedance dynamic microphone is recommended).
4. Input/Output connector: an on-board standard 16-pin DIP socket is provided for TTL I/O audio output, and optional power input to or output from board.
5. Audio output power: .5W. RMS, 1.5W. peak into 4 ohms, .25W. RMS, .75W. peak into 8 ohms.
6. SYN DIG OUT (synchronized digital output), UNSYN DIG OUT, and DIG OUT ACTIVE: 9 LSTTL init load drive outputs, min.
7. DIG IN and CLOCK: inputs presenting 5 LSTTL unit loads, max.
8. Squelch: A built-in squelch circuit sets a threshold defining whether or not the signal level from the audio input is large enough to be considered valid. If a valid audio input is present then DIG OUT ACTIVE is high, SYN DIG OUT or UNSYN DIG OUT can be sampled, and an LED indicator is lit. The squelch circuit has a fast-attack/slow-decay characteristic.
9. Mounting: four holes are provided for mounting purposes.
10. Strain relief: two holes are provided so that user can tie the power supply input cable to the board.

**PRICE: \$85.00**

**TITLE: MULTIMUSIC**

**PUBLISHERS NAME: SONORA COMPUTING**

**DESCRIPTION:** From your Apple II speaker or cassette port, you can now hear the pleasant harmonies of a Bach chorale. Our unique set of machine language subroutines which perform high-speed switching between the notes of any desired chord make these harmonies possible. A full 7, octave range provides you with great flexibility. Real-time graphics enables the composer to view the composition as it is played. Multimusic also includes an easy to use text editor, a standard note-name compiler, instructions and examples.

**PRICE: \$25.00**

**TITLE: MUSIC BOX**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION.** Your Apple comes alive with sound and color when you start the Music Box. Music Box will play for you a three octave instrument or type in a song. Accompanying the music is a brilliant full color light show. Standard musical notations includes note time, dotted notes and tempo, sharps and flats, rests and tempo. All notes can be easily returned from the



keyboard to produce special sound effects. Basic musical notation is explained with two songs and a documentation.

**PRICE: \$12.95**

**TITLE: MUSIC II**

**PUBLISHERS NAME: MICROPRODUCTS**

**DESCRIPTION:** If mankind's first musical instrument produced only perfectly pitched, constant amplitude sine waves, the whole concept of music would have been written off as too boring. Our fascination with musical sound stems from its complexities: overtones (harmonics), envelope, vibrato, tremolo, etc. For instance, a plucked instrument produces a note which quickly increases in amplitude to a peak amplitude and then dies off relatively slowly. If we examine the frequency composition of that note, say every 25ms, we'll see that each segment consists of a number of harmonically related frequencies and, further, that the relative amplitudes of frequencies in one segment are not the same as in another segment. Complicated to describe, easy to hear; our ears do not confuse banjos with harps. Musical interest also stems from complexities in execution such as intentionally distorting the rhythm or tying groups of notes together into phrases.

The purpose of this introduction is to point out that when it comes to electronic music synthesis, simple synthesis will generate simply boring music. With this in mind, MICROPRODUCTS set out to create a sophisticated, yet easy to use electronic music synthesizer. This program is supplied at no cost with the Data Acq. & Dist. card.

MUSIC II is a set of programs for the MICROPRODUCTS ADC/DAC card which turn the Apple II into a sophisticated music synthesizer. Four programs provide for the creation of complex musical waveforms, the entering and editing of musical scores, the transformation of scores into computer musical instructions (compiler), and a program to play the music through the DAC's. A library of musical instruments (ie, waveforms) may be created which can be called up for use within the musical scores. The programs permit the playing of four notes simultaneously (or more with a trick) and the use of several instruments simultaneously. The programs support a variety of printers and are written entirely in machine language for maximum speed. They run on all full memory Apples including Applesoft/ROM and accommodate multi-disk systems. They are available in either DOS 3.2 or 3.3.

The waveform generator program provides for the creation of "musical instruments" by parametric definition of a prototype note. The note is broken into segments to permit the duration of each segment and the amplitude of each frequency component of each segment to be specified. Both the prototype note and its specification are stored on disk. Editing features enable easy and rapid changes to a waveform. HI-RES graphics plot the waveform as it is generated. A print mode provides hard copy of the specification.

The program for entering musical scores utilizes a specialized text editor which minimizes the drudgery of entering or changing scores. The program accepts key and time signatures, tempos, multiple ending repeats, and waveform (instrument) designators. The range of notes spans the piano keyboard. While most designations follow standard musical convention, some have been modified to enhance musical expression. For example, a measure may contain 64 beats with the quarter notes (nominally 16 beats)

slightly shortened or lengthened for rhythmic purposes. The score may be printed and stored on disk.

The compiler program generates a machine language musical score from the text musical score. The compiler indicates the location of syntax errors and provides a library of error messages. A print mode obtains a hard copy of the errors. A successfully compiled score may be stored on disk.

The fourth program plays the music through the MICROPRODUCTS DAC's. When given a title, the program loads the compiled score along with the appropriate prototype waveforms from disk and plays the music. A disk can contain as much music as an LP record. Included with MUSIC II are several pieces of music and prototype waveforms. You need not explore the fascinating realm of waveform definition in order to score your first music.

**PRICE:**

**TITLE: MUSICOMP**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** An electronic music sheet that lets you compose, arrange, play, and store your very own tunes is provided. Use the Apple's built-in speaker or an external sound system. Also turns your Apple II system into a coin-free "computer jukebox," with 24 sample selections that demonstrate the kinds of compositions you can create with the program.

You can quickly begin using Musicomp to play, record, and edit your own compositions if you've had any training in music or music theory. Even if you don't have much musical aptitude, you can enjoy Musicomp's pre-programmed tunes while showing off your Apple in a unique way.

This program:

- \* lets you edit your compositions note-by-note so you get precisely the music you want
- \* displays, centered on your screen, each note it plays on a music staff so you learn music symbols as you hear their corresponding sounds
- \* can be connected to a stereo system through the cassette output jack so you can use your personal computer to play music with or without adding expensive equipment.

You can key in your own music, edit it, store, recall, and play it back with Musicomp's Play and Create options. Use your Apple keyboard as you would a piano keyboard- over a full four-octave chromatic range.

In addition to setting key and time signatures, you also set the tone of every piece you create. Musicomp allows you to arrange as well as compose with its three "voice" and four "timbre" settings that alter tone. One combination of settings produces a tone suggestive of woodwinds, for example, while another combination sounds like a harpsichord.

**PRICE: \$45.00**

**TITLE: NAME THAT TUNE**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION:** Using solfeggio syllables or scale degree numbers, identification (by sound) of the degrees of the scale is taught. Familiar tunes are utilized in a game context. Anyone who can read simple directions can use it.

**PRICE: \$100.00**

**TITLE: NOTEWRITER**

**PUBLISHERS NAME: PASSPORT DESIGNS, INC.**

**DESCRIPTION:** Notewriter software transforms Soundchaser into a real-time monophonic music transcriber. A new and unique tool for writing music, Notewriter is the fastest music entry system available- it writes what you play. Lay down melody or bass lines, write you own lead sheets & band parts in any key, meter or tempo. The notes you play on the keyboard appear simultaneously on the screen in standard music notation. This "music processor" is your composing tool. Advanced editing features let you move themes around, fix mistakes, transpose, add notes & rests, change meter & key signature, and more. The Notewriter editor can be used to edit music already transcribed, or to enter a new piece from scratch one note at a time. Play back your tune at any point to hear the results, or print out the completed piece on a graphics printer.

Now, if you play music, you can write music- with Notewriter.

**PRICE:**

**TITLE: SINGLE ALBUMS**

**PUBLISHERS NAME: ALF PRODUCTS**

**DESCRIPTION:** ALF's Album Series are disks of pre-programmed songs for Music Card MCl and Music Card MCl6 owners. Albums identified by a number (Ø, 1, 2, etc.) are for the MCl6 (some MCl6 albums require more than one MCl6 card); the letters A, B, C, etc. are for the MCl. Album O/A contains 24 Christmas songs including We Wish You a Merry Christmas, O Holy Night, We Three Kings, I Saw Three Ships, O Christmas Tree, and Away in a Manger. Album 1/B has 16 songs, mostly classical, including The Entertainer (from "The Sting"), Haydn's Symphony #94 2nd Movement, Moussorgsky's Promenade, Mozart's Rondo alla Turca, Bach's Air in D (and several Bach inventions). In album 2/C there are 12 songs including Love is Blue, What's New Pussycat?, With a Little Bit of Luck, and Swingin in the Country. Album 3/D has 12 songs including Bugler's Holiday, Amoeba Jig, Syncopated Clock, four Brothers, and How High the Moon. Album 4/E has 20 Christmas favorites including Frosty the Snowman, Drummer Boy, Silver Bells, Sleigh Ride, Toyland, and White Christmas. Album 5/F has 13 songs programmed by John Sauter, including Matchmaker, Sunrise Sunset, Roll out the Barrel, If I Were a Rich Man, and Cabaret. Album 6/G has 12 songs programmed by David Silveria, including Can You Read My Mind?, Fast food, Dixie Boogie, Lara's Theme, and Magestic Rag. Album 9/J has 12 songs programmed and many composed by Craig Crossman, including Hawaii 5-0, Baby Elephant Walk, The Disco Diode, Waltz of the Electrons, and California Girl. Album 10/K has 12 songs including Moonlight Sonata, Louis Blues, Dance of the Sugarplum Faries, Cotton's Dream (Nadia's Theme) and Washington Post March.

**PRICE: \$14.95**

**TITLE: SONGS IN THE KEY OF APPLE**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Allows you to see and hear your favorite tunes, pre-programmed tunes or music your create (up to 200 notes, including rests, per musical piece).

**PRICE: \$10.95**

**TITLE: SOUNDCHASER**

**PUBLISHERS NAME: PASSPORT DESIGNS, INC.**

**DESCRIPTION:** The Keyboard

At the heart of the system is a professional 49-key, four octave keyboard. The unit features superb "touch" and is housed in a



handcrafted solid wood cabinet. The interface card links the keyboard to the computer and supplies the "keys down" data. Together they become a tactile, expressive input device.

#### Soundchaser Analog

The Soundchaser Analog system consists of the keyboard and interface card, Passport Designs Analog Voice Cards, and the Music Operating System software.

The hardware features a three-voice analog card with state of the art components. Oscillator, filter and amplifier are computer-controlled; one card or two may be used for up to six voices.

In software, the choice is yours with Soundchaser's menu-driven Music Operating System. Create sounds with the Edit section--two envelope generators with floating sustain and low frequency oscillators provide advanced sonic control, allowing you to draw contours and modify waveform shapes as never before. Overall time value, loudness, resonance and frequency are only a few of the control options possible with Soundchaser's soft sliders, switches and contours.

Use the Sequencer section to lay down bass lines or chords while you play over them. The sequence is fully polyphonic, with over 3,000 notes and ten to fifteen minute capacity. You can play a live overdub with a completely different sound, change the playback sound with the Arrange option, or vary the playback speed.

Programmable contours, analog filtering and system flexibility...only Soundchaser Analog offers advanced modulation and computer control for a totally new way to create sound.

#### Soundchaser Digital

Soundchaser Digital consists of the keyboard and interface card, the Mountain Computer Inc. Music System, and Soundchaser Digital performance software.

Each of the eight voices in the hardware system uses two independently programmed and controlled digital oscillators. The software lets you define the "instruments" or presets - by drawing the waveforms or by specifying their harmonic content- and control or modify these elements with envelope generators, low frequency oscillators (LFO's) and effects generators. The ten presets in memory can be changed "on the fly", with no delay. Two ADSR-type envelopes per voice, and a LFO, allow complete control of amplitude, frequency, fm contour, and vibrato. The effects generators modify oscillator waveforms in memory for phasing, filtering and timbre changes- a necessary feature for duplicating natural instrument sounds. All voice parameters are displayed and alterable during performance.

An outstanding feature of the Soundchaser Digital performance system is the multi-track sequencer, which can store and playback entire orchestral arrangements. The sequencer is fully polyphonic-like a multi-track recording studio- and allows complex "layering" by recording both the keyboard information and the preset being played. Or you can live on the keyboard while your sequences are playing back.

Advanced multi-track recorder and eightvoice polyphonic synthesizer...Soundchaser Digital. A flexible and practical system with the features and capability of digital synthesizers costing thousands more.

#### PRICE:

**TITLE: SOUNDWARE MUSIC BOX**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** Generates sound effects for games or may be programmed independently for a wide variety of audio experiences. 8-32K

**PRICE: \$29.95**



**TITLE: THE ELECTRIC DUET**

**PUBLISHERS NAME: INSOFT CORP.**

**DESCRIPTION:** Plays, without the need for add-on circuit boards, music. Two simultaneous music parts, each with four instrument voices, are provided using an advanced digital music generating technique. The Electric Duet's features include a preloaded musical library, a piano program that allows playing two-part music at the keyboard, and a full feature music editor to simplify music entry. For musical accompaniment, music files are allowed to be loaded into your BASIC programs.

**PRICE: \$29.95**

**TITLE: THE V100 INTERACTIVE VOICE SYNTHESIZER**

**PUBLISHERS NAME: VYNET CORPORATION**

**DESCRIPTION:** With telephone interface is an Apple II compatible, low-cost, solution to remote data base access arrangements.

\* Direct telephone connection, auto-dial/answer

\* Tough-tone generation and detection

\* Includes 1000 word, LPC allophone vocabulary

\* Software for sentence/library construction

\* Expandable with 300 (\$150) or 1300 (\$495) high quality LPC words

**PRICE: \$395.00**

**TITLE: THE VOICE**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** The Voice gives your Apple the power of speech. Use the standard vocabulary to speak an endless combination of phrases and sentences, or easily record your own vocabulary to make your Apple say anything you like. Each data disk can store up to 80 words or phrases which can be sorted for quick reference. What's more, the Voice allows you to speak from any Basic program by using Print commands.

**PRICE: \$39.95**

## PERSONAL/HOME USE

This section contains programs that might be of interest for you at home or for family use. There are basic entry levels for new users and include many good day to day uses that will make life a little more enjoyable and record keeping a little easier. The whole family can use the Apple at home with these applications.



# PERSONAL/HOME USE

16K NATAL PACKAGE . . . . .	PH-1
8K NATAL PACKAGE . . . . .	PH-1
A CHRISTMAS STORY . . . . .	PH-1
AA2.5 PLANETS . . . . .	PH-1
AA3 PLANETS . . . . .	PH-2
ADVANCED COORDINATES . . . . .	PH-2
ADVANCED SOLUNARS . . . . .	PH-2
ALCOHOL . . . . .	PH-2
APPLE BARREL II . . . . .	PH-2
APPLE MENU COOKBOOK . . . . .	PH-3
APPLE SACK 2- HOME EDUCATION . . . . .	PH-3
APPLEROOTS . . . . .	PH-3
ASTRO-SCOPE . . . . .	PH-4
ASTROAPPLE . . . . .	PH-4
ASTROLOGY . . . . .	PH 5
AUTO RECORDS . . . . .	PH-5
AUTOMATED CHART SERVICE . . . . .	PH-5
BANK ACCOUNT MANAGER . . . . .	PH-5
BIBLE QUIZ . . . . .	PH-6
BIO-PRINTER . . . . .	PH-6
BIORHYTHM COMPATIBILITY ANALYSIS . . . . .	PH-6
BREAKING AWAY . . . . .	PH-6
CALORIE COUNTER . . . . .	PH-6
CAROLING CAROLING SERIES . . . . .	PH-6
CHART WRITER: WRITTEN NATAL REPORT . . . . .	PH-6
CHECKBOOK . . . . .	PH-8
CHEQUEMATE . . . . .	PH-8
CHIRON PACKAGE . . . . .	PH-8
COMBIOLOGICAL DIAL PRINTER . . . . .	PH-8
COMPARATIVE BUYING . . . . .	PH-9
COMPLETE DISK SYSTEM . . . . .	PH-9
COMPLETE PROGRESSIONS AND DIRECTIONS . . . . .	PH-9
COMPLETE SYNASTRY PACKAGE . . . . .	PH-10
COMPOSITES AND RELATIONSHIP . . . . .	PH-10
COMPUTER CAJUN CUISINE . . . . .	PH-11
CYCLE GRAPHS . . . . .	PH-11
DESIGNER PICTURE SERIES . . . . .	PH-11
DESK CALENDAR II . . . . .	PH-11
DISK-O-CHECK . . . . .	PH-12
ENERGY MISER . . . . .	PH-12
EXECUTIVE FITNESS . . . . .	PH-12
FAMILY BUDGET ANALYSIS . . . . .	PH-12
FAMILY FINANCIAL PLANNER . . . . .	PH-12
FAMILY FUN . . . . .	PH-13
FAST FACTS . . . . .	PH-13
GENERAL NATAL PACKAGE . . . . .	PH-13
GROCERY LIST . . . . .	PH-14
HOME ACCOUNTANT . . . . .	PH-14
HOME FINANCE PAK I . . . . .	PH-14
HOME FINANCE PROGRAM . . . . .	PH-14
HOME INVENTORY FILE . . . . .	PH-15
HOME MONEY MINDER . . . . .	PH-15
HOME SAFE HOME . . . . .	PH-15
HOME-1 . . . . .	PH-15
HYPER TIGER . . . . .	PH-15
INCOME PROPERTY CASH FLOW LEVERAGE . . . . .	PH-15
INTERLUDE . . . . .	PH-16
JOB READINESS - ASSESSMENT AND DEVELOPMENT . . . . .	PH-16
KNOW YOURSELF . . . . .	PH-16
LUCKY DAY NUMEROLOGY REPORT . . . . .	PH-16
LUCKY LOTTERY REPORT . . . . .	PH-16
MAGAZINE FILE . . . . .	PH-16

MATRIX DISK EPHEMERIDES (1700-2300)	PH-17
MENU PLANNER	PH-18
MORTGAGE	PH-18
MOSTLY BASIC HOUSEHOLD PROGRAM PACKAGE	PH-18
MUSIC RETRIEVAL SYSTEM (M.R.S.)	PH-19
NAME & ADDRESS	PH-19
NATAL HOROSCOPE PACKAGE	PH-19
NIGHT BEFORE CHRISTMAS	PH-20
NUTRICALC	PH-21
PERSONAL ACCOUNTANT	PH-21
PERSONAL ACCOUNTING SYSTEM I	PH-21
PERSONAL EXPENSE RECORD	PH-21
PERSONAL FINANCE MANAGER	PH-21
PIP I	PH-22
PIP II	PH-22
PLANET ACCURACY	PH-22
POISON YOUR HOME	PH-23
PRINTING PACKAGE	PH-23
PRO-PRINTING PACKAGE	PH-23
PSYCHOTHERAPY	PH-23
Q-PON HELPER	PH-23
RAYED-WHEEL PRINTING PACKAGE	PH-24
RECIPE FILE	PH-24
SEX-O-SCOPE	PH-24
SOFTWARE PAC #1 (Some Common Basic Programs)	PH-24
SOLAR AND LUNAR RETURNS	PH-25
SOLAR ARC DIRECTIONS	PH-25
TAXMAN-82	PH-25
TEQUILA SUNRISE	PH-26
THE COUNT (A WINNING BLACKJACK SYSTEM)	PH-26
THE HOME ACCOUNTANT	PH-27
THE MENU II	PH-27
THE SEXUALITY LIFE DYNAMIC	PH-27
THE TIME TRAVELER	PH-28
TRANSIT ANALYSIS: WHERE AND WHEN	PH-28
TRANSITS AND SECONDARY PROGRESSIONS	PH-28
URANIAN PLANETS	PH-29
URANIAN PRINTING PACKAGE	PH-29



**TITLE: 16K NATAL PACKAGE****PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Program provides a complete natal package. Program output includes Angles plus Geo and Helio planet longitudes and latitudes. Right Ascension and Declination available at a key-stroke. Chart wheel of House complete with Aspectscope for analysis of planet aspects, angular separation and midpoints. Two different aspect grids show aspects, angular separation and midpoints for all planets, Moon, Lunar Node, Midheaven and Ascendant. Options that may be performed on either Geocentric or Heliocentric planet positions are these:

- Midpoints can be sorted on all dials (360, 90, 45 degree, etc.) and displayed in either Zodiac or 360 degree notation.

- A variety of Harmonic options that include:

- \* first ten harmonic charts listed out with planets sorted in Zodiac order for each and asterisks (\*) mark conjunctions found through user selected orbs.

- User may scan any series of harmonic charts or select any single harmonic chart.

A powerful natal package for the 16K computer.

**PRICE: \$50.00**

**TITLE: 8K NATAL PACKAGE****PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Computes a complete natal chart wheel with the house system of the user's selection. House cusps are to the minute and planets are placed in the house with retrogrades indicated. An Aspectscope for each planet is available in the wheel center. Major aspects, angular separation and midpoints are displayed. Here is a powerful program capable of calculating innumerable charts for any place on Earth at a modest price.

**PRICE: \$30.00**

**TITLE: A CHRISTMAS STORY****PUBLISHERS NAME: HOMEWARE**

**DESCRIPTION:** The story of Shepherds, Wisemen, Mary, Joseph, The Star and The Baby Jesus, retold from the Gospels of Luke and Matthew. Over ten different Low-Resolution color graphics scenes and seven Christmas Carols combine with the scriptures to tell the old, old story that is forever new.

**PRICE: 410.00**

**TITLE: AA2.5 PLANETS****PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Program will execute single or batch mode processing for dates from 1700 through 2300 AD with approximately one minute of arc accuracy. Pluto slightly less exact outside of twentieth century.

**PRICE: \$100.00**

**TITLE: AA3 PLANETS****PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Program can generate one chart at a time and batch chart processing is not facilitated. Planet accuracy is to one second of arc and the time period covered is 1800 to 2000. Program is large and takes quite a while to run. Not recommended unless you need this kind of precision.

**PRICE: \$100.00**

10. METRIC CONVERSION
11. ADDITION
12. SUBTRACTION
13. MULTIPLICATION
14. DIVISION
15. APPLE LEMANS
16. THINK
17. MOUNTAIN
18. LUNA C, T OR L
19. DYNAMITE
20. ALIEN

You can use all of the above programs without knowing anything about DOS or programming. When you are ready to start writing your own programs, you can use the programming utilities (6, 7, and 8) in your own programs. You can even quickly set up your own Master Menu program by using the menu program on the disk. It's called "Apple Parrel software" - just type in your own program titles in place of the above program titles.

**PRICE:**

**TITLE: APPLE MENU COOKBOOK**

**PUBLISHERS NAME: PROGRESSIVE SOFTWARE**

**DESCRIPTION:** This is an index-accessed data storage/retrieval program. Recipes (or menus) are stored in any of 61 files. On entering a file, all titles are displayed and the user is asked to select where he would like to enter. A simple hit of the space bar or 1 or 2 will cause the file to be paged forward or in reverse.

Data is entered in 40 character lines with no limit to the number of line per entry. Easy editing of files is a basic part of the program as well as overall erase commands.

Apple Menu Cookbook is formulated after the New York Times cookbook and appendix containing conversion tables, calorie references, and many other useful features are included.

**PRICE: \$19.95**

**TITLE: APPLE SACK 2- HOME EDUCATION**

**PUBLISHERS NAME: COMPUTERMART**

**DESCRIPTION:** Your Apple can help around the house with programs such as: Bartender, Car Maint., Kitchen Metrics, Recipe, Mortgage and more. Education programs include: Code, Math, Planets, Taxman, States, Metrics Quiz, Curves, Roots, Survey and several more. 20 programs on this disk.

**PRICE: \$24.95**

**TITLE: APPLEROOTS**

**PUBLISHERS NAME: CDS CORPORATION**

**DESCRIPTION:** AppleRoots helps you to organize your Genealogy (or Animal Breeding) records. Completely menu-driven with prompts so that even a novice can use it like an expert. Stores 260-350 records per disk. Only needs 24K and one disk drive. Written in Applesoft. Print functions: 1) Four Generation Pedigree; 2) Records by Family Group; 3) Individual Records; 4) List of children by parent; 5) Index of Records All print functions can be displayed on the screen. 17 user-definable fields. The size and names of the fields can be easily changed - allowing you to customize your database for Genealogy or Animal Breeding.

**PRICE: \$39.95**

**TITLE: ASTRO-SCOPE**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Not only casts an accurate horoscope, but provides a mini interpretation as well. Each planet is analyzed by Sign, House, and Aspect using an in-depth psychological approach. Can accurately delineate the positive and negative stresses in your character as deduced from the rich symbolism of the planetary interactions at the time of birth. Output is to computer screen.

**PRICE: \$30.00**

**TITLE: ASTROAPPLE**

**PUBLISHERS NAME: THE SOFTWARE FACTORY**

**DESCRIPTION:** Astrology is the science of correlating human behavior to the movement of the stars and planets. The mathematical calculations required by an astrologer are well suited to the computer and other programs exist which will perform these calculations. ASTROAPPLE goes beyond these mathematics and provides APPLE II owners with a mini astrologer in their own machine! The following are the features that make ASTROAPPLE unique;

**NATAL HOROSCOPES (BIRTH CHARTS)**

ASTROAPPLE produces a natal horoscope for each subject who has entered his or her birth data. Included in the interpretation are paragraphs describing your personality (Sun sign), emotional behavior (Moon sign), the way others see you (Ascendant), what sign you are most attracted to, what sign you may marry, and much more!

Following the interpretation, a chart may be displayed showing the positions of the planets at the time of your birth, accurate to one half of one degree! This information may be copied directly into the familiar circular horoscope format for a permanent record of your astrological birthday. A blank horoscope and complete instructions on how to create this chart are included in the ASTROAPPLE manual.

**THIRTY DAY FORECASTS**

ASTROAPPLE Produces a 30 day forecast for any month (or months) you choose. You are told which days may be good for business, or which days the stars say you should watch your temper and/or your pocket book!

ASTROAPPLE was developed by a former teacher of astrology with over 10 years of programming experience. It consists of two separate 12K programs written APPLESOFT BASIC and 6502 machine language and requires 32K or larger system. Both cassette and diskette versions are available. ASTROAPPLE comes complete with an instruction manual which helps explain the terminology and techniques of the astrologer.

**PRICE: \$15.00 Cassette**

**\$20.00**

**TITLE: ASTROLOGY**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** Using either the tropical or sidereal zodiac, program draws your astrological chart. Upon entering your birth data in response to the on screen prompts, your Apple will compute and then display your personalized horoscope. After the horoscope has been manufactured, the program will list the angular relationships (aspects) of all of the planets. Observe, this program does not attempt to interrupt the abundance of facts and relationships of a particular horoscope. For such data it is recommended that you confer with a standard text or an experienced astrologer.

Knowledge of Astrology is a must for use of this program.

**PRICE: \$19.95**

**TITLE: AUTO RECORDS****PUBLISHERS NAME: JOHNNY APPLESEED SOFTWARE AND COMPANY**

**DESCRIPTION:** This program was developed using the APPLESOFT PROGRAMMER, it has all the nice features including the single key commands. It will process and manage all data associated with the operation and maintenance of your CAR, TRUCK or RV. Specifically it will: Manage information on the LENDER or your vehicle. Manage information of the INSURANCE AGENT of your vehicle. Keep MONTHLY, YEARLY, and CUMULATIVE TOTALS on all costs incurred in the operation of your vehicle. ANALYZE and SUMMARIZE the performance of your vehicle. Compute all TAX DEDUCTIBLE amounts for you any time during the year.

You can store data for up to 28 different vehicles on a data diskette and the cost of AUTO RECORDS is Tax Deductible!

**PRICE: \$39.95****TITLE: AUTOMATED CHART SERVICE****PUBLISHERS NAME: MATRIX SOFTWARE****HARDWARE REQUIREMENTS: 80 column printer**

**DESCRIPTION:** A total chart service system in that it can accept multiple sets of birth data and perform selected- and different-tasks for each chart. You may enter as many jobs as required complete with all of the possible options and let the machine take over. Our current M-64 Disk System is fully able to perform all of the same tasks as the new M-65. The difference is that M-65 can do a nearly unlimited number of charts each with its own series of jobs. It's a commercial workhorse designed for the high volume bookshop or as a regional chart service. Every possible option will be available to the system.

**PRICE:****TITLE: BANK ACCOUNT MANAGER****PUBLISHERS NAME: EDUCATIONAL COMPUTING**

**DESCRIPTION:** Bank Account Manager will organize your financial life and save you time and money. Compare these features:

- \* Bank balance and bank statement reconciliation for up to two separate accounts (checking and/or savings)
- \* Fast- Up to 400 transactions (on any date) may be kept in memory for rapid manipulations
- \* Easy data entry and modification- ideal for home use
- \* Data can be archived to disk, allowing an unlimited capacity- perfect for small business applications
- \* Versatile- Group by categories (groceries, utilities, etc.) you have created in the description
- \* Unique search capability- data can be grouped and displayed according to: type of transaction, check number, date, description, amount, bank status, or any combination
- \* Clobber-proof: very "forgiving" of user errors

**PRICE: \$49.95****TITLE: BIBLE QUIZ****PUBLISHERS NAME: PROFESSIONAL COMPUTER SYSTEMS**

**DESCRIPTION:** You can easily memorize verses of scripture with this unique program. Enter the verses you wish to memorize into the data base using the ADF VERSES program provided. The BIBLE QUIZ Program will then formulate questions on all the verses you have selected to be quizzed on. There are 5 different types of questions each verse may have (with a wide range of different ways to ask the questions):



- \* Give the Reference to a Quoted Verse
- \* Give the Topic of a Verse Number
- \* Quote a Numbered Verse
- \* Pick the Verse Number in a Given Chapter for a Particular Subject
- \* Fill the Blanks of a Quoted Verse

When adding verses, you may select which file you want to add to. You may base your files on Books of the Bible, Subject Matter, Favorite Verses, or whichever way suits your way of study.

Included with the package is a File Maintenance Program which can be used on any sequential access text file. You may Insert, Delete, or Change any record in the file.

A Catalog program is also included that will count the number of sectors used, sectors left, and the percent of utilization.

**PRICE: \$29.95**

**TITLE: BIO-PRINTER**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**HARDWARE REQUIREMENTS: 80 column printer**

**DESCRIPTION:** Provides a plotting routine for biorhythms. Works on any 80 column printer. Day by day listings include the biorhythm graph along with daily indicators of amplitude and portion of cycle elapsed for all three factors. A professional program for line printer only.

**PRICE: \$50.00**

**TITLE: BIORHYTHM COMPATIBILITY ANALYSIS**

**PUBLISHERS NAME: MIKE ROWE PRODUCTIONS**

**DESCRIPTION:** Now you can compare your biorhythm cycles easily with those of your friends and enemies and try to avoid those 'critical' days. This program gives a printout of percentage compatibility of two people and then plots their biorhythm cycles for the current month.

**PRICE: \$10.00**

**TITLE: BREAKING AWAY**

**PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**DESCRIPTION:** Watch your moves --Do you ever predict your day? Let "Piorhythms" program do it for you. Only the flats are flat...the rest play really sharp music with the "Apple Piano."

**PRICE: \$25.00**

**TITLE: CALORIE COUNTER**

**PUBLISHERS NAME: VIDEO WORLD**

**DESCRIPTION:** A program for the kitchen which gives you the calories of a food you input. Good program for weight watchers.

**PRICE: Cassette \$25.00**

**TITLE: CAROLING CAROLING SERIES**

**PUBLISHERS NAME: HOMEWARE**

**DESCRIPTION:** Gather round your computer to sing your favorite Christmas carols. Each program in the caroling series lets you choose from a number of your favorite carols and even entertains you with color graphics display while you are singing.

**PRICE: \$ 7.50 each**  
**\$20.00 set of 3**

**TITLE: CHART WRITER: WRITTEN NATAL REPORT**

**PH-6**

## **PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Takes advantage of the newest methods of computer disk technology yet the report has a direct and personal feel. Perfect for the busy professional, small bookstore operator and weekend shopping mall entrepreneur.

Computes a complete natal horoscope (your choice of house systems) for any place in the world for any date in history. A written report is generated based on Planets in Signs, Planets in Houses and Planetary Aspects. All combinations that may not take place for hundreds of years.

Has a dual planetary program built into it. This includes a very accurate (one minute arc) program for the twentieth century and a less accurate (within a degree) for dates outside this century. The output from Chart Writer includes a complete listing of Angles and Planets positions along with the written report. The length averages several pages (in some cases more) and is attractively formatted to fit on 8-1/2 by 11 paper. The report is fragmented into chapters such as Home Life, Love Life, Career, et cetera. Each chapter contains a series of paragraphs related to that section of life. All astrological jargon and keywords are suppressed but are available as part of the printout if so desired.

### **Features:**

-Short range high accuracy or long range low accuracy. Select one minute of arc accuracy for the twentieth century or our less accurate but long range Time Traveler positions. You can write a report for a date in the very ancient past or far distant future.

-Aspects to Angles. The very important aspects to horoscope angles (Ascendant and Midheaven) are built right into the package.

-Solar Houses- if you have an unidentified birth time, you can select to have the report written using Solar Houses (Sun on ascendant). This type of report is useful even if you do have a timed birth.

-Geocentric or Heliocentric- you may select to have either a Geocentric (standard horoscope) or Heliocentric based report generated. A chance to experiment with the Heliocentric perspective which has been growing in popularity.

-User Defined Aspects- You may either use the pre-defined set of aspects and orbs included within the program or define your own set. In this way you are able to formulate a report based on exactly the same aspects and orbs you use in your practice.

-Student Key Feature- Students can benefit from reading a report where the astrological keys have been included to provide them with hints as to how to go about interpreting. Chart Writer gives you the option of printing the straight paragraphs or the paragraphs followed by a short key (example: Sun Trine Venus) to indicate the astrological principles involved. It is up to you.

-Write Your Own Interpretations- We have designed the package so that you can replace any or all of our paragraphs with your own words and insights. Of course you will have the original as a backup.

All of the principles involved in the interpretation package are known to you: Planets in Signs, Planets in Houses and Aspects between Planets. We have a special paragraph, rewrite the text in your own words, or alter ours, and replace the paragraph for use in the report. You can change several or the whole report. What most people do is to begin changing parts of the report where they have had special insight and understanding. A little at a time, you can operate your own personalized written interpretation. We feel that this is a very important feature in our package.

**PRICE: 2 Disks \$500.00**

**TITLE: CHECKBOOK****PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA****DESCRIPTION:** Keep accounts and records up to date. Checks may be sorted by type. Facilities for cassette storage of data.**PRICE: \$15.95****TITLE: CHEQUEMATE****PUBLISHERS NAME: MASTERWORKS SOFTWARE, INC.****HARDWARE REQUIREMENTS: 1-4 Disk Drive, Line Printer**

**DESCRIPTION:** CHEQUEMATE is the complete home financial package for the Apple. All aspects of home money management are addressed including checks, charge cards, cash control, automated teller transactions, "checkless" bill paying and budgeting. You can even split checks into two categories, e.g. to keep track of interest and principal separately for house payments. A complete set of reports allows you to make hard copy printouts or review them on the screen. In addition, the contents of the screen can be printed at any time. Standard abbreviations can be defined so recurring entries can be generated with minimal keystrokes. CHEQUEMATE is user friendly and provides complete access to every data element, making it impossible to have uncorrectable entry error. Extensive entry editing and prompting reduce user errors. User defined file location means that CHEQUEMATE can handle as many accounts as you have disks and larger accounts than most other similar systems. If you want to see the new generation of home money systems, get CHEQUEMATE with the following capabilities.

- \* Budgeting With Actuals
- \* Charge Cards And Accounts
- \* Multiple Categories Per Check
- \* Automatic Teller Transactions
- \* Standard Entries By Abbreviations
- \* Multiple Checking Accounts
- \* Video Display Printed At Any Time (CTRL Y)
- \* Comprehensive Documentation
- \* Graphic Budget Analysis
- \* Unpaid Bills Display In Check Entry
- \* No Monthly Or Annual Cutoff Necessary
- \* All Data Accessible For Change

**REPORTS**

- \* Check List
- \* Standard Entry List
- \* Budget List
- \* Budget Comparisons
- \* Charge List

Graphic Budget/Actual

**PRICE: \$39.95****TITLE: CHIRON PACKAGE****PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** This program utilizes Chiron elements developed by James Neely. Program outputs standard planets, Moon, and Lunar Node along with positions for Chiron for years 1900 to 2000.

**PRICE: 8K \$30.00****16K \$50.00****TITLE: COMBIOLOGICAL DIAL PRINTER****PUBLISHERS NAME: MATRIX SOFTWARE**

**HARDWARE REQUIREMENTS:** Either the Epson MX-70, the MX-80 FT with PH-8



**graphics or the Paper Tiger IDS 445 with graphics.**

**DESCRIPTION:** Program generates finished 360 degree or 90 degree dials (other too) complete with planet placements ready for use with most of the plastic wheels currently in use today. Just place your own plastic dial over these Matrix wheels and you are already to go your analytical work. Positioning is exact.

**PRICE: \$75.00**

**TITLE: COMPARATIVE BUYING**

**PUBLISHERS NAME: INTERPRETIVE EDUCATION**

**DESCRIPTION:** This informative consumer program explains the concepts of comparative buying. It provides the learner with interactive experiences in determining items to purchase based on a number of variables.

**Disk subjects:** (1) concepts of comparative buying  
(2) decisions before buying  
(3) effective sales buying  
(4) cash buying versus credit buying

**PRICE: \$165.00 4 disk set**

**TITLE: COMPLETE DISK SYSTEM**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Matrix began designing a disk system more than two years ago. This system is designed to be the center and heart of a much larger series of programs that are being made available. We have worked to the end of making M-64, a comprehensive package capable of both straight batch printer output and user screen interaction. The professional needs the printed batch output to keep up with the client load and flexibility that user screen interaction can provide for those times when we want to experiment. M-64 is an effective compromise that provides you with the best of both worlds.

The M-64 is much more than a chart casting package although it is that as well. It is also a file keeper that can manufacture and maintain any number of client or research charts as permanent records. It is an analytical tool providing instant analysis of client or chart records. It is a workhorse chart printer sending one or one hundred and one charts through the printer as finished printed pages. It is a utility program putting most disk utility functions at your fingertips. And the best part is, it is the center of a much larger series of programs that will interact with M-64 to provide you with unlimited flexibility. Matrix has a large number of programs that can read and use the file records created by the M-64. Our new Picture Wheel professional series are M-64 compatible.

In essence, M-64 is the starting point for building an automated astrological system.

**PRICE: \$125.00**

**TITLE: COMPLETE PROGRESSIONS AND DIRECTIONS**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Calculates a natal chart and the various progressions and directions to that chart. Output is given in the convenient format date when the progression becomes exact and WHAT was progressed to WHAT on that date. If both progressions and directions are chosen, the hits of both come out in chronological order.

Has many options. If you wish to put points into the radix other than the standard planets and angles, you may input up to ten optional sensitive points. A standard list of aspects is included (even antiscion and ecliptic parallel in declination),



which you can delete from or add to by specifying the angle you wish to be considered as an aspect. You may direct planets, angles, and optional points. You may use quite a variety of methods, both standard and specialized.

Degree for a year arc

Naibod arc

True solar arc

Vertical arc

Secondary progressions

Special factor that can be applied to any of the above arcs.

You define a span of time for which directions are to be taken. Finally, all of the above may occur either in Zodiac Longitude or in Right Ascension (which is the way many feel is the correct method of performing primary directions).

Any of the above direction methods may be used alone or in combination. You may select or deselect any of the series of radix or progressed planets, points, etc. In addition, you may select to view the results on the computer screen or have them automatically sent to the printer for permanent records.

**PRICE: \$100.00**

#### **TITLE: COMPLETE SYNASTRY PACKAGE**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** A complete and very flexible synastry package. All major chart comparison techniques are available through this program. Allows you to experiment with many different chart comparison methods. You can select calculations for any of seven charts:

1-Radix A

2-Radix B

3-Relationship

4-Composite

5-Progressed

6-Progressed B

7-Progressed Relationship

The relationship chart is the midpoint in time and space. The Composite chart is made from the midpoints in space of the corresponding points in any two other charts. The composite ascendant can be calculated in either of two ways, as a midpoint or as the corresponding ascendant to the composite midheaven. The progressed chart can be calculated converse as well as the normal direct method.

Any two of these seven charts can be compared in any of the following methods:

\* A chart wheel display of planets from one chart placed in the houses of another chart (or the same chart).

\* An aspect grid displaying aspects between any two charts. Midpoints or angular separation can also be displayed in this way.

\* Listings of planets, house cusps and midpoints from one or two charts. These listings can also be given in 180 degree dial format to see oppositions, 120 degrees to see trines, et cetera.

**PRICE: \$100.00**

#### **TITLE: COMPOSITES AND RELATIONSHIP**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Program executes two of the more popular synastry techniques: Composite Charts and Relationship Charts. The Composite Chart is a chart fabricated from midpoints between any two planets in the charts of two individuals. For example, the midpoint between Mars in one individual's chart and Mars in a second person's chart becomes the Mars of the Composite chart for

the two. The Relationship Chart is one cast for the midpoint in time and space between the birth of two individuals. The program accepts two sets of birth information and constructs either the Composite or Relationship Chart. The Relationship Option also prints out the geographic coordinates for the midpoint in space for the chart.

Program displays house cusps and planets for new chart. Aspects and angular separation for all planets can be displayed by a keystroke. These options are displayed on center screen while the two charts involved are seen to either side.

**PRICE: \$30.00**

**TITLE: COMPUTER CAJUN CUISINE**

**PUBLISHERS NAME: TECHNICAL SOFTWARE**

**DESCRIPTION:** Program computes exact amounts of all ingredients necessary for any number of servings of eight Louisiana soup and gumbo recipes.

**PRICE: Cassette; \$25.00**

**Disk; \$30.00**

**TITLE: CYCLE GRAPHS**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Valuable for analyzing the general effects of long term cycles in the horoscope. Permits user the selection to view either a single cycle or 2 cycle combinations. Cycles are entered on the graph by length and are plotted in relationship to a sensitive point in the Zodiac or to a natal house cusps. The entire cycle of a planet's relationship to a degree or cusp unfolds on the graph. In addition to tracing any number of individual cycles on the graph, this program allows you to quantify two cycles relative to each other, simply by averaging them. The combined peaks and valleys are charted out on the Hi-Res grid.

**PRICE: \$30.00**

**TITLE: DESIGNER PICTURE SERIES**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**HARDWARE REQUIREMENTS: EPSON MX-70, MX-80, or IDS 445 PAPER TIGER with graphics.**

**DESCRIPTION:** A new stage in the chronology of computerized astrology. Basically, the Designer Wheels make it possible to produce astrological chart wheels that compare with preprinted forms in quality.

The Designer Wheel includes a complete disk package that is fully automated. Output consists of the Designer Wheel as a first page and an Aspect/Midpoint grid on a second page. The Designer Wheel packages can read files by M-64 and M-30 (disk version) in either single chart or batch mode. Please observe that the M-67 Designer Package is not a natal calculation package, it is a sophisticated printout package that accesses chart files manufactured by either of the aforementioned packages.

Currently there are two different types of Designer Packages:

Natal Chart Wheel (mandala type) and

360 degree self-aspecting wheel.

**PRICE: \$150.00. Specify printer when ordering.**

**TITLE: DESK CALENDAR II**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** An indispensable tool to better manage your time! Use at home/office to help remind you of important dates and

appointments. Prints easy-to-update daily schedule with room to add your own notes. Can search by keyword and knows most holidays. Stands alone or works well with most clocks.  
**PRICE: \$35.00**

**TITLE: DISK-O-CHECK**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** A personal accountant to manage your home or small business finances. Hassle free checkbook balancing is here! Disk-O-Check lets you record over 2000 checks and deposits on diskette where they can be easily accessed. Disk-O-Check can even handle multiple accounts.

Keep records straight and avoid tax filing headaches.

It's easy to see where your money goes and how you're spending it. Disk-O-Check categorizes your checks by expense classification, providing you with a detailed report summarizing all the checks and the total amount spent for each separate category...gasoline, car maintenance, food, utilities, entertainment, etc. This allows you to budget more effectively. It's easy to use!

You get automatic checknumbering and the current date with a single keystroke as you enter checks. Want to know what checks you've written on a certain day of a particular month? Search for a particular check number, or amount, or check description. Disk-O-Check has the answers.

**PRICE: \$100.00**

**TITLE: ENERGY MISER**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** A complete heating/cooling analysis program for your home or office that will calculate heat loss or gain due to poor insulation, will predict the annual savings of your utility bills with improvements and modifications to calculate your return on investment for changes or modifications to your environmental system, and will provide a calculation of your energy tax credit.  
**PRICE: \$29.95**

**TITLE: EXECUTIVE FITNESS**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** Let the Apple lead you through a series of programmed exercises designed for your office (or home computer room), which bring out that old strength and get the heart up to speed. Progress up the ladder to the proper fitness level for your age. Watch the exercise "performed" on your CRT then follow its planned speed to perform the exercise yourself. You even get a planned rest period.

**PRICE: \$19.95**

**TITLE: FAMILY BUDGET ANALYSIS**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** Assimilates information on monthly income and expenditures, and returns a logical formatted record of the monthly budget, along with recommendations for money management based on the national averages.

**PRICE: \$150.00**

**TITLE: FAMILY FINANCIAL PLANNER**

**PUBLISHERS NAME: SOFT ONE**

**DESCRIPTION:** This program consists of six programs which may be  
**PH-12**

used to compute such things as mortgage payments, college fund savings programs, investment programs, etc. It is an interactive program which asks simple questions and does highly complex calculations to give simple answers. It can replace a whole library of compound interest tables.

**PRICE: Cassette \$23.50**  
**Diskette \$28.50**

**TITLE: FAMILY FUN**

**PUBLISHERS NAME: TECK ASSOCIATES**

**DESCRIPTION:** A disk of ten programs with instructional and entertaining programs for the entire family. The first seven programs are useful with preschoolers.

**INCLUDED ARE:**

**LETTERS** - instructs the user to match the capital letter with the letter shown.

**NUMBERS** - instructs the user to match the number with the number shown.

**BOTH** - mixes the numbers and capital letters to be matched.

**letters** - instructs the user to match lower case letters.

**LETTERS** - mixed capital and lower case letters to be matched.

**SYMBOLS** - shows one symbol, such as ?, :, \* and the user must then type the symbol.

**HOW MANY** - helps the young learner with counting. A group of letters is shown and the user types in the answer.

**GOOP TOWER** - is a game in which the user builds a tower using "goop balls". In addition to being a fun game, GOOP TOWER also teaches problem solving strategies.

**IQ TEST** - is really a quiz using picture puns.

**DISCOVER** - a 6 by 6 grid in which the user must discover a pattern which is hidden under boxes. The user uncovers boxes until he/she can predict the pattern. A score is given.

**PRICE: \$19.95**

**TITLE: FAST FACTS**

**PUBLISHERS NAME: RICHARD LORANCE & ASSOC., LTD.**

**DESCRIPTION:** Specific program objects are divided into six systematic program fields, they are:

1) Planning for Retirement

2) College Financing for the kids

3) Diversifying your investments

4) The result of inflation in devaluing your earnings

5) Costs of Borrowing Money and Loan Balance at any point in time

6) Investment calculations for compounding and future values.

These programs will allow you to change input data and in many cases identify erroneous entry values. Their speed and ease of operation is their primary value with no need to learn special control characters.

**PRICE: \$95.00**

**TITLE: GENERAL NATAL PACKAGE**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Will compute a natal chart for any date in the current century and any location on this planet. The accuracy is AAL and retrograde planets are indicated. The angles Ascendant and Midheaven are given. Most versions contain no house system- excepting where memory permits. Here is a complete natal program for the smaller computers.

**PRICE: \$25.00**



**TITLE: GROCERY LIST****PUBLISHERS NAME: COMPUTERIZED MANAGEMENT SYSTEMS****HARDWARE REQUIREMENTS: Printer****DESCRIPTION:** A genuinely useful household program designed to organize supermarket shipping.**OBJECTIVE:** Shoppers will instantly be able to use this easy, self-prompting program. In a few minutes they will be able to scan a file of up to 500 user defined itself, choosing those needed with a single key stroke. The computer will then print a list organized by table, section number, or department, such as "DAIRY", "DELI", or other four letter code.**MASTER FILE EDITOR:** Included so you may add to, delete, or change the Master File to suit your individual needs.**MASTER FILE:** Included, a list of over 100 grocery and associated items to set you off to a fast start.**PRICE: \$24.95****TITLE: HOME ACCOUNTANT****PUBLISHERS NAME: CONTINENTAL SOFTWARE****DESCRIPTION:**

The fact is, Home Accountant is one of those rare programs that virtually everybody can profit from using. It's powerful enough to handle even the most complicated family budget- yet it's so easy to use that one quick trip through the manual may be all you'll ever need.

With Home Accountant you can track up to 100 budget categories, 5 different checking accounts, and all the credit cards you can carry. Just press a few keys and watch the program print your checks, new worth and other financial statements. And when you see the full-color graphs of actual vs. budgeted expenses, trend line analyses, etc., you'll know you bought the best. See your Apple Dealer soon for a demonstration. And start watching your fortunes climb with Home Accountant.

**PRICE: \$74.95****TITLE: HOME FINANCE PAK I****PUBLISHERS NAME: SPECTRUM SOFTWARE****DESCRIPTION:****SAVINGS:** Allows user to keep track of deposits/withdrawals for up to 10 savings accounts. Complete records shown via 40 column printer or screen.**BUDGET:** Allows user to define up to 20 budget items. Actual expense input can be by keyboard or by automatic reading of CHECKBOOK II files. Costs are automatically sorted and compared with budget. Produces both monthly actual/budget/variance report and a year-to-date by month summary of actual costs. Color graphics display of expenses.**CREDIT CARD:** Organizes, stores and displays purchases, payments and service charges. Up to 10 separate cards. Screen or 40 column printer display.**PRICE: \$49.95****TITLE: HOME FINANCE PROGRAM****PUBLISHERS NAME: DIGITAL MARKETING****DESCRIPTION:** The most complete & concise home budgeting program for the Apple. Simply laid out & easy to use.

\* 175 entries/12 categories per month or year

\* Month-to-date, year-to-date summaries

\* Classifies tax deductible expenditures

\* Balances &amp; reconciles checkbook

Specify if you have Apple II+.

**PRICE: \$39.95**

**SOFTWARE**

**TITLE: HOME INVENTORY FILE**

**PUBLISHERS NAME: WESTWARE SOFTWARE, INC.**

**DESCRIPTION:** The program enters, changes, deletes, searches (generic) and reports (with totals) on the following fields:

\*ID NUMBER - ten alphanumeric characters

\*MANUFACTURER - fifteen alphanumeric characters used for manufacturer's nMW

\*DESCRIPTION - thirty nine alphanumeric characters

\*DATA PURCH - ten alphanumeric characters for data purchased

\*QUANT - number of items purchased

**PRICE: \$30.00**

**TITLE: HOME MONEY MINDER**

**PUBLISHERS NAME: CONTINENTAL SOFTWARE**

**HARDWARE REQUIREMENTS: Printer**

**DESCRIPTION:** This complete home financial system combines Budgeting with a Home Checkbook Program. Bank reconciliation. Transactions by month by budget category. Yearly Budget. Total expenses compared monthly and year-to-date.

**PRICE: \$34.95**

**TITLE: HOME SAFE HOME**

**PUBLISHERS NAME: INTERPRETIVE EDUCATION**

**DESCRIPTION:** This informative safety program highlights the major household hazards of fire, electrical shocks, falls and poisoning. Preventative suggestions are emphasized.

**PRICE: \$165.00**

**TITLE: HOME-1**

**PUBLISHERS NAME: MPA ENTERPRISES**

**DESCRIPTION:** Mortgage analysis: simple mortgage payments, monthly mortgage tabulations, and time to pay-off mortgage. Rent vs. buy: compares the rent versus buy decision. Average home calculates a rough home value based on home design information.

**PRICE: \$25.00**

**TITLE: HYPER TIGER**

**PUBLISHERS NAME: 21ST CENTURY TECH**

**DESCRIPTION:** 460 graphics driver for the most demanding user. All the needed options included. Three sizes, centering sideways chartmode inverse.

**PRICE: \$29.95**

**TITLE: INCOME PROPERTY CASH FLOW LEVERAGE**

**PUBLISHERS NAME: REALTY SOFTWARE**

**DESCRIPTION:** This program is designed to aid both investors and real estate brokers in making knowledgeable decisions when buying, selling, and comparing income properties.

The analysis considers the effects of insurance, property taxes, utility expenses, interest expenses, closing costs and debt service on the total amount of cash necessary for purchase and the total monthly payment. The analysis also calculated the return on investment and the actual leverage achieved based on user estimated annual appreciation rate.

**PRICE: Disk or Tape \$20.00**

**TITLE: INTERLUDE****PUBLISHERS NAME: INTERLUDE**

**DESCRIPTION:** Interlude begins with a unique computer interview of the participants to determine their mood. Then it searches its memory to select the best Interlude for the occasion. You may be referred to the instruction manual which describes most of the 106 Interludes, or your instructions may appear on your screen if you've chanced to hit upon one of the many surprise Interludes buried within the program. (When you discover secret Interlude #99, your love life may never be the same again!)

**PRICE:**

**TITLE: JOB READINESS - ASSESSMENT AND DEVELOPMENT****PUBLISHERS NAME: INTERPRETIVE EDUCATION**

**DESCRIPTION:** This innovative program combines the techniques of assessment and instruction in supplying the student with information to develop job readiness. It also provides the practical knowledge necessary for filling out applications and locating job placement agencies.

**PRICE: \$165.00 4 disks**

**TITLE: KNOW YOURSELF****PUBLISHERS NAME: CREATIVE COMPUTING**

**DESCRIPTION:** This package contains four programs. **LIFE EXPECTANCY** - will a different life style increase your life expectancy? **PSYCHOTHERAPY** - analyze symptoms in your feelings and behavior to determine your mental health. **COMPUTER LITERACY** - what's yours? **ALCOHOL** - effect of alcohol on your behavior.

**PRICE: \$7.95**

**TITLE: LUCKY DAY NUMEROLOGY REPORT****PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** A complete disk based report writer on a numerological analysis of a customer's name and birthdate. Produces approximately four pages (8-1/2 by 11) of formatted text; ready for your customers.

The report is based on a precise numerological evaluation of both the customer name and birthdate. The program produces the following:

- Name Paragraph- Brief report on the evaluation of both the name. Tips, advice, suggestions, etc.
- Birthday Paragraph- Quick breakdown of birthday number along with comments, advice, etc.
- Lucky Day Report For One Year- One year report on a month by month basis provides the lucky days for the month along with catchy phrases and quick comments on when or when not to gamble.

**PRICE: \$250.00**

**TITLE: LUCKY LOTTERY REPORT****PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Provides lucky numbers for each day for a year period (an eleven page report). The Lucky Lottery Numbers for each day are based upon a precise numerological relationship of the customer's name/birthday numbers to the current date.

**PRICE: \$250.00**

**TITLE: MAGAZINE FILE**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** The need to keep track of the many articles, programs, new products, hardware advertisements, software advertisements, etc. in magazines is great.

Here is the answer. A magazine article filing program done in 6 modules to keep memory requirement low. A 16K system with the Applesoft II firmware card can run these programs.

**MAG FILE CREATE** - The first module creates a master file and a subfile by subject name and code order. There are enough characters allowed on the subject line for remarks or a subject.

**MAG FILE SEARCH** - This module searches the master or the subfile by users choice of code number or subject. Subjects are searched for and displayed on the basis of their left four characters. For example the subjects entitled: SORTING, SORTING PROGRAM, SORTS BY LAST NAME or SORTS (NUMBERS) will all be displayed with the data necessary to find the article.

**MAG FILE DUMP** - This module dumps all data to the screen with the corresponding record number 18 lines at a time. This allows user to see if data is present and correct.

**MAG FILE CORRECT** - In addition to the correction routine in the CREATE module another correction module is provided for later updating of a record or deletion of a record or placing different data in a record.

**MAG FILE TRANSFER** - Allows the user with one drive to create a backup copy of the programs plus the data files. This module is provided for later updating of a record or deletion of a record or placing different data in a record.

**MAG FILES** is done in Applesoft II using easy to use GET statements so that RETURN is not used on non-essential Input.

Plus all the excellent screen formatting, error trapping and user orientation you have come to expect from Southeastern Software.

**PRICE: \$18.00**

**TITLE: MATRIX DISK EPHEMERIDES (1700-2300)**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** The introduction of accurate and fast access disk ephemerides mark the advent of a new level of professional programs. Before, planetary positions were calculated using complicated algorithms. A disk ephemeris consists of predetermined planetary positions housed in tables very much like traditional printed ephemerides. Disk ephemerides are different from printed tables because positions do not always need to be stored require being stored for each day. Interpolation routines in the computer program have to power to generate very accurate positions based on positions stored at less frequent intervals. The result is that disk ephemerides can create a natal chart faster than earlier programs. This becomes of specific importance when getting into transit searching and related techniques. The disadvantage of disk ephemerides is that they are only available for certain time periods, in this case 15 to 20 year segments. The user has to provide the computer with the correct disk for the time interval being explored. For current years, this is no a problem since 15 years is a long time into the future if you are evaluating client transit charts for a coming year or activity of that nature.

The initial release covers the years 1700 to 2300 with an accuracy of about 36 seconds; Geocentric positions only. The number of



years that will fit on a single disk will vary depending upon which computer system you are using. Expect approximately fifteen or more years on the average.

**PRICE:**

**TITLE: MENU PLANNER**

**PUBLISHERS NAME: HOMEWARE**

**DESCRIPTION:** You store your own favorite breakfast, lunch and dinner menus. Menu Planner will assemble menus for up to two weeks for one, two or three meals each day then prepare a shopping list of all items you need to prepare those menus plus a list of miscellaneous items. All you do is take the printout and head for the grocery store.

**PRICE: \$20.00**

**TITLE: MORTGAGE**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** Calculates and optimizes mortgage payments.

**PRICE: \$15.95**

**TITLE: MOSTLY BASIC HOUSEHOLD PROGRAM PACKAGE**

**PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

**DESCRIPTION:** The Mostly BASIC Household Program Package contains 10 programs which are useful in performing a number of household duties.

Two programs which give a synopsis of energy consumption are the ELECTRIC ENERGY USAGE and the GAS MILEAGE CALCULATOR. The former compares energy units used (and the cost of those units) during a "base" year to any other year's worth of the same type of energy usage. It gives the difference between the two years with monthly increases or decreases noted. By comparing the consumption of the first year lived in a home or apartment with the most recent full year, the user can determine during which months the use of energy has risen or fallen the most. Comparing two recent years is another way in which the program can be utilized. Analysis of the data provided by the computer can give the user several suggestions as to why the use of energy has risen or fallen. The GAS MILEAGE CALCULATOR is also designed to make the user aware of energy consumption. The user enters the estimated EPA rating, the odometer reading before filling the gas tank, the reading when the tank is filled again, and the number of gallons it took to fill the tank. The program not only calculated the mileage, but also tells whether or not the car is meeting the EPA mileage value.

Diet-conscious households will undoubtedly find The BASIC DIET and the RECIPE AMOUNT CALCULATOR selections useful. The BASIC DIET is designed to help a dieter reach his goal, or will tell him if he is underweight. By inputting the present weight, height and sex of the subject, the user can find out what his or her proper weight should be within 5%. The computer determines the number of pounds needed to be lost to obtain the goal. The desired weekly weight loss is entered and a weight loss table is listed, pinpointing the week number, the current weight, and the total loss. A daily calorie amount is given to help the dieter maintain the proper weight.

The RECIPE AMOUNT CALCULATOR figures the amount of ingredients necessary, for any given recipe, to achieve the desired number of servings.

If yearly interest rates, cumulative interest rates per month, principals and balances confuse you, the AMORTIZATION SCHEDULE program is just what you need. Given the principal borrowed, the

yearly interest rate and monthly payment, it calculates and displays the balance, principal, interest and cumulative interest for each month. By giving it the three basic requirements, the computer can calculate the monthly payment and give the current balance.

Future home owners can benefit from The HOUSE BUYING GUIDE. It is designed to help the user review the aspects of purchasing a home for profit-making, whether the buyer wants to rent out the building or sell it in the future. The program takes into consideration monetary factors such as the cost of insurance, taxes and water, yet also weighs factors such as the quality of the neighborhood, number of baths, age of home, and whether or not the structure has a basement or family room. After answering questions, the potential investor is advised, through a point value system, on the possibilities a given building has for making a profit for the buyer.

Two programs which offer no frills but are still priceless in the household are the DIGITAL STOPWATCH and the MESSAGE TAKER. Basically, the STOPWATCH displays the hours, minutes and seconds, beginning with 0 HRS., 0 MIN., 0 SEC., and running through 1,000 or until told to stop. The MESSAGE TAKER takes 6 different messages noting "To and From". In this way the computer can be used to deliver "note-pad" messages with the programs is limited only by the user's imagination.

Medical expenses, including the type and the cumulative total, can be tracked through use of the MEDICAL EXPENSE RECORD. Each type and its cost are entered until the yearly medical expenses are completely listed. The year is noted at the end of the statement. This program is a quick method of reviewing a whole year's worth of medical costs at a glance, and is invaluable at tax time.

Aside from the more serious aspects of running a household, the package offers a program designed for its entertaining quality. The TAROT CARD READER program is based on a deck of 78 cards used in fortune telling. The program randomly selects 10 of the cards and uses them to answer the player's question. As with regular Tarot Cards, each one has two meanings, one for right side up and one for the reverse. There is also a meaning attached to the position the card is holding after it is dealt. There are 156 meanings available and the meanings to the 10 cards selected are listed briefly.

PRICE: \$29.95

**TITLE: MUSIC RETRIEVAL SYSTEM (M.R.S.)**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A fast, flexible file management system for storing, cataloging, and retrieving information on your record collection. Sort by title, composer, etc. Readily adaptable to other storage/retrieval tasks by changing the data names.

PRICE: \$17.95

**TITLE: NAME & ADDRESS**

**PUBLISHERS NAME: WALLACE MICRO MART**

**DESCRIPTION:** The name and address program allows the user to keep track of names, addresses, phone numbers, important dates, and codes. For both businesses and individuals. This program is an excellent data base with searching facilities.

PRICE:

**TITLE: NATAL HOROSCOPE PACKAGE**

**PUBLISHERS NAME: MATRIX SOFTWARE**

## **HARDWARE REQUIREMENTS: Printer**

**DESCRIPTION:** Batch outputs up to ten sets of two page horoscopes containing nearly every significant piece of astrological data used by professionals. The package is an economical way to start a home chart service since only a computer and printer is required. A disk is not necessary. Up to ten charts can be entered for processing at once- each with all of the built in options (house system, midpoint sort dial, etc. operative). The user may elect to print one or both pages for each chart. Here is a list of what the package contains:

- Charts for any date in this century with AA2 accuracy and for any place in the world. Retrogrades indicated.
  - Easy for beginners to read: Signs, Planets, to their abbreviations to allow the beginner to learn right from the printed page.
  - Output includes a seven inch round wheel with proportionally spaced planets with Koch, Placidus, Campanus and Equal House Systems built in (others can be special ordered).
  - In addition to the four house systems, additional options include Zero Aries on the Ascendant Houses, Solar Houses (sun on ascendant), user defined ascendant and heliocentric chart. These at a touch of a button.
  - European style wheel too. You may de-select the chart wheel spokes and have instead the European style wheel so that aspects can be drawn in colored pencils and pens.
  - Complete listing of planet and angle positions in Zodiacal Longitude, Declination and Retrograde status.
  - Quadruplicates and Triplicates listed both in separate tables and next to the planet position listings.
  - Traditional Positive/Negative (masculine/feminine) indication for each planet.
  - Angular, cadent and succedent status for each of the planets.
  - House position of each planet. Tells you which house a planet is in.
  - Essential dignities (Ruler, Exalted, Detriment and Fall) indicated for all planets.
  - Sensitive Points: Ascendant, midheaven, vertex, part of fortune and equatorial ascendant (East point) provided.
  - Sun/Moon angle in degrees-minutes-seconds, quarter of the moon, and moon fast/slow indication are given.
  - Aspect Grid containing all major aspects complete with degrees-minutes away from exact aspect and applying/separating status. Planets not in major aspect have their angular separation given in degrees and minutes.
  - Midpoints for planets, lunar mode, ascendant and midheaven are given in degrees and minutes. The user may enter any Dial (360 degree, 90 degree, 45 degree, etc.) for the sort.
  - Daily Motion or Travel of Planets given in degrees-minutes-seconds.
  - Total number of major aspects to each planet are given.
  - Total number of times each aspect occurs in the chart is given.
  - Total number of planets in each house is indicated.
  - Four quadrant analysis (planets in each quadrant).
  - Your name and address particulars in the upper right hand portion of the first page as a permanent part of the program at no extra charge.
  - Astroglyphs are available with this program.
- PRICE: \$150.00**

## **TITLE: NIGHT BEFORE CHRISTMAS**

### **PUBLISHERS NAME: HOMEWARE**

**DESCRIPTION:** A Christmas classic retold using Apple's Low-Resolution graphics with details and animation you have to see to



believe.

PRICE: \$10.00

**TITLE: NUTRICALC**

**PUBLISHERS NAME: PCD SYSTEMS**

**DESCRIPTION:** Designed specifically to meet the needs of today's dietician, nutritionist, or researcher for a fast, accurate assessment of an individual's nutrient intake. It eliminates the tedium of planning new menus or developing special diets for selected nutritional problem cases. And best of all, since using NUTRICALC helps reduce dietary staff labor input, it completely pays for itself in less than six months!!!

**HERE'S WHAT YOU GET:**

750 COMMON FOODS, given in household measurements, each detailed for eighteen commonly used food nutrients. The user may add to or alter the food and nutrient data base as required to customize the program to specific need. Nutrient values have been taken from standard USDA listings, and are presented in easily retrievable form. Comparisons of input data to the Recommended Daily Allowances for specific subgroups is provided. Calculations are based on age, sex, and activity level of the individuals; and for infants, weight.

The NUTRICALC program also allows the user to build new food items by combining components already in the foods data base. Standard menus may also be stored by the user to further streamline dietary information processing.

NO COMPUTER PROGRAMMING SKILLS OR PRIOR EXPOSURE TO COMPUTERS IS ASSUMED OR NECESSARY FOR SUCCESSFUL USE OF THE NUTRICALC PROGRAM.

**PRICE:**

**TITLE: PERSONAL ACCOUNTANT**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The PERSONAL ACCOUNTANT allows you to keep track of costs in your home easily with the same degree of accuracy you would in your business. The system has provisions for memo entries and an audit trail, yet, it is simple to use. You press a few buttons at the end of the year and your itemized deductions are ready to file. You can check your bank balance or look at monthly costs by item.

**PRICE: \$69.95**

**TITLE: PERSONAL ACCOUNTING SYSTEM I**

**PUBLISHERS NAME: CREATIVE SOFTWARE**

**DESCRIPTION:** Turns your checking account into a recording and budget management system.

**PRICE: \$99.95**

**TITLE: PERSONAL EXPENSE RECORD**

**PUBLISHERS NAME: WISE OWL WORKSHOP**

**DESCRIPTION:** This program keeps a record of your personal expenses in eleven categories of your own choosing. It allows you to compare this year's expenses to last year's expenditures, also, you have the option of graphing a plot of expenses in color graphics. The program comes complete with instructions for custom modifications. A sample expense record form is provided.

**PRICE: \$9.95**

**TITLE: PERSONAL FINANCE MANAGER**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**



**DESCRIPTION:** The PERSONAL FINANCE MANAGER is an easy-to-use family budget management program that puts important financial information at your fingertips. It helps you keep better records of expenditures, analyze your spending patterns, validate checkbook statements, and maintain your tax records. On a single disk, you can store a full year's worth of family financial records - including detailed information on all check transactions, deposits, cash and credit card expenditures. You can also classify expenditures as tax deductible, consolidate the information for easier itemization when filing taxes, and "roll over" automatically to the next year.

This program can be used to:

- define or modify up to 24 budget categories so you can compare spending habits with budget limits you've set
- define or modify as many as 12 credit card expenditure accounts so you know instantaneously just how much money you owe
- provides monthly and year-to-date summaries of expenditures so you can tell at a moments glance how realistic your budget is
- plots budget category activity, providing quick graphic comparisons of dollar amounts
- lets you print out information at the touch of a key so you can take your financial records to the bank, the IRS, or wherever they're needed.

By using the Enter Data option, you can add or modify financial transactions - such as cash and credit card expenditures - quickly and easily. The Data Search/Sort option provides simple listings of monthly budget entries you specify, such as all tax-deductible expenditures for any particular quarter. This is extremely useful when you file taxes, for example, because it allows you to isolate the information you need quickly.

Reconcile Checkbook, lets you account for all checking account transactions that appear on your bank's monthly statement. The program will indicate the amount of any discrepancy it detects, helping you determine the source of the error.

**PRICE: \$75.00**

**TITLE: PIP I**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** Provides a basic data management system for managing your Personal Assets. It runs entirely in memory using DATA statements for storing your Asset Information on Tape or Disk. provides reports on: Depreciation Costs; Replacement Analysis; sorted Asset Analysis by Year of Purchase, Decreasing Cost Decreasing Current Value, and Decreasing replacement Value. Runs with either Screen-Only or with Parallel/Serial Printer. Gives you the lists and values for your Insurance Agent.

**PRICE: \$24.95**

**TITLE: PIP II**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** Provides a complete disk-based data management system for managing your personal assets. It is a disk version of the PIP I program.

**PRICE: \$29.95**

**TITLE: PLANET ACCURACY**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** One second of arc accuracy for all of the planets, Sun and Moon. Programs includes Delta T correction input as well as Sidereal/Tropical option. Program outputs Ecliptic Longitude, Latitude, Right Ascension and declination in degrees or minutes

and seconds.  
**PRICE: \$100.00**

**TITLE: POISON YOUR HOME**

**PUBLISHERS NAME: INTERPRETIVE EDUCATION**

**DESCRIPTION:** This is a concept oriented, high interest program describing ways in which one may be poisoned, types of poisons, preventative techniques and what to do if a poisoning occurs.

**PRICE: \$210.00**

**TITLE: PRINTING PACKAGE**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**HARDWARE REQUIREMENTS: 80 column printer**

**DESCRIPTION:** Prints out the essential natal information on an 8-1/2 by 11 sheet of paper. Data consists of: small rectangular chart wheel with house cusps given to the minute and planets located in correct houses. Retrogrades, sidereal time, vertex, part of fortune, equatorial ascendant (East Point) plus triplicates and quadruplicates given. Planets given in Zodiac Longitude, Latitude and Declination. Aspect grid with angular separation and major aspects if present. Midpoint grid with planetary pairs given in degrees-sign-minutes. Available either in 16K or 32K versions. The difference of the planetary accuracy (AA1 or AA2)

**PRICE: \$50.00**

**TITLE: PRO-PRINTING PACKAGE**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Matrix Software's finest printing package for the professional astrologer or bookstore. This program provides a complete natal package printed out on an 8-1/2 x 11 page. The programs contains large 7 inch circular chart wheel with planets proportionally spaced in the houses. Your name and address (five lines which can accommodate 20 characters) is included at no extra cost. Program provides list of planet longitude and declination, Moon, Lunar Node, Vertex, Part of Fortune and Equatorial Ascendant as well. Quadruplicates and Triplicates too. An aspect grid that includes node, ascendant and midheaven with major aspects plus indication of Applying/Separating and degrees out of orb. A complete midpoint sort in Zodiac order on any dial you request.

Bookstores and professional services around the world are using this program to obtain hard copy charts for their clients. The chart is a finished product ready for sale.

**PRICE: \$100.00**

**TITLE: PSYCHOTHERAPY**

**PUBLISHERS NAME: CREATIVE COMPUTING SOFTWARE**

**DESCRIPTION:** The APPLE analyst asks you 20 questions to help you decide if you might benefit from a psychotherapist. Psychotherapy asks you about your feelings, actions, and phobias and compares them against population norms. Here's where you can talk freely about those special powers people are using against you. With sound. For all computer freaks.

**PRICE:**

**TITLE: Q-PON HELPER**

**PUBLISHERS NAME: LAST**

**DESCRIPTION:** A data base management system for organizing a

family's inventory of grocery store coupons. The program tracks over 300 coupons by brand name, description, category, expiration date, expected cost of the item, quantity discounts, net cost, and percentage of savings. This handy system will catalog your coupons for easy access, search and update the data base, and save/load disk files. On market day, Q-PON HELPER will plan your shopping trip by showing you each coupon, letting you select/nonselect each bargain, and preparing a sorted listing of those coupons.

**PRICE: \$19.95**

**TITLE: RAYED-WHEEL PRINTING PACKAGE**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**HARDWARE REQUIREMENTS: 80 Column Printer**

**DESCRIPTION:** This is a large program designed for an 80 column printer. Program provides wheel as well as longitude, latitude, declination, triplicities, quadruplicates, etc. This program is offered in several forms. The user may special order five lines for name and address at \$7.00 additional charge.

**PRICE: \$50.00**

**TITLE: RECIPE FILE**

**PUBLISHERS NAME: HOMEWARE**

**DESCRIPTION:** File all your recipes away then recall them anytime you wish. Recipe File also takes over that irksome task of converting a recipe to feed a larger or smaller group than originally intended. Just tell the computer how many people you want to feed and Recipe will automatically alter the amounts to feed any number. Information is displayed on either CRT or printer.

**PRICE: \$20.00**

**TITLE: SEX-O-SCOPE**

**PUBLISHERS NAME: AGS SOFTWARE**

**DESCRIPTION:** It's all there in the stars, but there are some things most astrologers would hesitate to tell you. About your sexual nature, and that of those you love - even though this is as much a part of you as anything else, and even though it is plainly stated in the language of your planets.

Now, however, you can learn these exciting secrets in the privacy of your own computer room!

This program erects and interprets your own individualized natal horoscope just as an astrologer would do - but it also tells you much much more than most astrologers would dare!

With Sex-O-Scope, you can gain self-understanding and self-acceptance, clarify your own needs, and find out how to honor them. You can determine what kind of partner is best for you, and learn what pleases her or him. You can use Sex-O-Scope to break the ice with those who are shy. Or you can just satisfy your curiosity about what makes someone tick!

Your private sex consultant is John Townley, master astrologer, author of PLANETS IN LOVE, and former editor of SFXOLOGY magazine. For years, he has studied ALL forms for sexual behavior, and along with his witty writing style in Sex-O-Scope, he brings a tolerant, understanding viewpoint.

**PRICE: \$30.00**

**TITLE: SOFTWARE PAC #1 (Some Common Basic Programs)**

**PUBLISHERS NAME: BASIC BUSINESS SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: Two disk drives**

**DESCRIPTION:** Consists of 76 programs which appeared in Osborne &



Associates book, "Some Common Basic Programs". The programs are broken up into four different areas:

1. Statistics
2. Finance
3. Math
4. Miscellaneous

Useful to many individual needs for it covers a very broad range of applications.

**PRICE: \$30.00 without book**  
**\$42.50 with book**

**TITLE: SOLAR AND LUNAR RETURNS**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Tropical and Sidereal Zodiacs supported with or without the effects of precession. Accurate Solar and Lunar Returns can be constructed in the house system of your choice. Solar Returns are accurate to around one minute of clock time and Lunar Returns to within several minutes. The calendar date and GMT for the return are listed out. Demi-returns are available for both Solar and Lunars. In addition, the user can look at any number of subsequent lunar returns in a row. On Lunar Returns, user may enter any Zodiac position and cast a chart for the return of the moon to that position. By this method sensitive points may be investigated. Aspects may be viewed along with angular separation in chart wheel center.

**PRICE: \$50.00**

**TITLE: SOLAR ARC DIRECTIONS**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Program permits user to choose either chart wheel or tabular list of planet positions and Angles for radix. The Wheel option includes an Aspectscope with aspects, angular separations and midpoints. In addition, a more detailed Aspectscope is available. This includes a list of the Angles plus the part of fortune, a tabular listing of the planets in the house cusps and a more powerful version of the Aspectscope. This version includes an indication of Applying/Separating as well as the number of degrees and minutes each aspect is out of orb. Zero Aries point is included in list of planets in the aspect analysis. A Solar arc Scan is available using either the True, Mean (Naibod) or Degree for a Year motion of the Sun. A year's worth of solar arc contacts are provided along with the current planet position (by solar arc), the aspect due and the calendar date when the radix are shown. You may also select to direct individual aspects (direct the Sun conjunct radix venus by Solar Arc, etc.) and receive the date on which this aspect is correct.

**PRICE: \$50.00**

**TITLE: TAXMAN-82**

**PUBLISHERS NAME: ATSUKO COMPUTING INTERNATIONAL**

**DESCRIPTION: ATTENTION VISICALC AND SUPERCALC USERS:**

Just in time for your 1981 Tax Return, Atsuko Computing International (ACI) would like to introduce our new product TAXMAN-82, an interactive TAX MANagement Program for your VisiCalc and SuperCalc electric worksheets. TAXMAN-82 was designed for interactive use by the taxpayer himself, unlike the others which deal with tax practitioners, to reduce the lengthy tax computations. As you know, VisiCalc and SuperCalc are well proven software as an electric worksheet, however these software do nothing unless you create a template. We have spent extensive man hours to develop and test TAXMAN-82 and have made it easy to



operate on any Micro-Computer utilizing VisiCalc and SuperCalc. TAXMAN-82 is useful throughout the year for planning and managing your financial burden, but now is the best time for retailers. TAXMAN-82 includes the following features:

- \* Federal 1040 pages 1 & 2
- \* Schedules A, B, C, D, E, F, G, R
- \* Forms 116, 2106, 2119, 2210, 2440, 2441, 3903, 4136, 4137, 4255, 4625, 4684, 4726, 4797, 4868, 4874, 4952, 4970, 4972, 5329, 5405, 5544, 5695, 5884, 6249, 6251, 6525
- \* Tax Tables A, B, C, D
- \* Tax Schedules X, Y, Z
- \* Sales tax tables for all states, plus local multiplier

TAXMAN-82 produces all final calculations and results that need only to be transcribed to the proper tax form, as detailed in the TAXMAN-82 documentation manual.

**PRICE: \$95.00**

**TITLE: TEQUILA SUNRISE**

**PUBLISHERS NAME: FLIGHT OPPS**

**DESCRIPTION:** Computes sunrise/sunset and twilight times for specific locations, anywhere in the world. Great for campers, hunters, athletic groups, schools, construction schedulers, travelers, boaters, pilots, police, radio and TV stations, or store merchants. Eliminates the inconvenience and inaccuracy of standard tables which are hard to use and only accurate near their observation point. Even daylight savings time changes are compensated for. You tell it what dates time changes happen, or just the year, and it will default to the proper dates automatically.

**SPECIAL FOR TRAVELERS-** No need to know the longitude or latitude of where you're going. Just enter the name of any major city in North America and the program will look up that location.

**PARENTS & TEACHERS-** Use it for an educational program. Its graphic presentation is great for showing season reversals between northern and southern hemispheres. You can also show the extreme long days and nights of high latitude areas. Even with the same time zone, a city 200 miles away can have up to an hour's difference in sunrise and sunset times.

**HANDY PRINTOUT-** The program will compute sunrise/sunset for one day or an entire year and print out each day's events on a neat and handy form.

**PRICE: \$15.00**

**TITLE: THE COUNT (A WINNING BLACKJACK SYSTEM)**

**PUBLISHERS NAME: PEAR SOFTWARE**

**DESCRIPTION:** A systematic approach to Blackjack play which minimizes house edge and maximizes the player's opportunity to win.

Teaches a basic playing strategy, without counting cards, which has been proven (in numerous independent computer tests dating back to 1962) to give the player a near standoff with the casino. THE COUNT also teaches a very simple card count system which can, at certain times, give the player a tremendous advantage over the dealer. With clubs' new policies designed to make card counting ineffectual, this method is more efficient than trying to learn long tables and different house rules.

THE COUNT also advises proper betting procedures and can be instructed to disallow improper card play. The current "card count" can be displayed at any time. Use it as a reminder! Winnings and losses are tallied by the system.

THE COUNT can be instructed to modify certain game conditions including double downs, pair splits, and insurance rules. It

even allows play with one to six decks of cards.

One or two evenings can be enough time to learn the basics if you want a chance to "hold your own."

If you don't have time or don't want to learn an elaborate system that goes too far, THE COUNT is an inexpensive alternative that could save you money.

Hi-Res graphics, easy to read displays, simulated playing conditions, learn at your own pace approach.

Add play strategy techniques as you develop familiarity with the system. Make THE COUNT a solid foundation for your success.

Helpful charts and instruction sheets remind you of important key points, and provide necessary information for your easy understanding of the system.

**PRICE: \$24.95**

#### **TITLE: THE HOME ACCOUNTANT**

**PUBLISHERS NAME: ABT MICROCOMPUTER SOFTWARE**

**DESCRIPTION:** THE HOME ACCOUNTANT provides you with a rapid, easy-to-use and flexible system of maintaining a record of your financial transactions.

Stop and think!

If you are like most people who have to deal each day with higher bills and a tighter budget, you could use THE HOME ACCOUNTANT to help sort out all of the transactions for which you are responsible:

- |   |                             |
|---|-----------------------------|
| * Mortgage Payments   | * Home Improvement Expenses |
| * Utility Bills   | * Insurance Payments        |
| * Education Expenses  | * Grocery Bills             |
| * Automobile Repairs  | * Entertainment Costs       |
| You can monitor and balance all of your account transactions: |                             |
| * Checking Account  | * Money Market Funds        |
| * Savings Account   | * Credit Card Accounts      |

THE HOME ACCOUNTANT's features include:

- \* String Searching to locate specific transactions
- \* File Sorting to reorganize transactions into chronological order
- \* Balance Display for individual and all accounts
- \* Listing of transactions - all, recent or outstanding items
- \* Year-to-date finance charge calculations
- \* GET-based, Menu-driven, Conversational format
- \* Random Access Files for rapid transaction additions and updates

**PRICE: \$25.00**

#### **TITLE: THE MENU II**

**PUBLISHERS NAME: C & H VIDEO**

**DESCRIPTION:** Plan meals with ease with the all new updated MENU II from C&H. More storage, more information per recipe and other new features in the new version.

- \* 6 meal classifications
- \* 2 special counters (calories, sodium, etc.)
- \* 24 ingredients per recipe
- \* write menus for 2 week periods
- \* produce printed shopping list
- \* add, change or delete any recipe
- \* 24 lines of comments
- \* feed up to 1,295 people per recipe

**PRICE: \$39.95**

#### **TITLE: THE SEXUALITY LIFE DYNAMIC**

**PUBLISHERS NAME: AVANT-GARDE CREATIONS**

**PH-27**

DESCRIPTION: A self transformative experience about sex that's enjoyable, unique, and extremely intuitive.

PRICE: \$15.95

**TITLE: THE TIME TRAVELER**

**PUBLISHERS NAME: MATRIX SOFTWARE**

DESCRIPTION: The Time Traveler computes planetary positioning for any specific date from 4713 B.C. forward in time. Accuracy for the most distant dates should be within a degree of an arc. The program calculates a complete natal Chart Wheel with house systems of choice. An Aspect-Scope is included in the chart wheel center with aspects, angular separations, and midpoints for all planets. This is an opportunity to examine ancient history and the distant future with theoretical accuracy.

PRICE: \$30.00

**TITLE: TRANSIT ANALYSIS: WHERE AND WHEN**

**PUBLISHERS NAME: MATRIX SOFTWARE**

DESCRIPTION: This is a powerful yet flexible program to learn what transits to a calculated radix occur within a particular time circa. The user is given the capability to limit the planets transitting or those in the radix that are considered, and accuracy of aspect determination (the more accurate, the longer the calculation time required); the user can select which aspects are to be allowed; specify and cause to be calculated a set of radix positions, including angles and house cusps. The resulting aspects are displayed in chronological sequence and give: name of transitting planet, aspect, name of radix point, date of transit and position of transitting planet. The user may choose to do transit aspects for an individual, several or all planets. Single aspects or a series of aspects to be searched for may be selected. The time interval between planet samplings is user selectable. The program can be ordered for the screen M-14A (with screen dump to printer) or for line printer alone, M-14B.

PRICE: \$100.00

**TITLE: TRANSITS AND SECONDARY PROGRESSIONS**

**PUBLISHERS NAME: MATRIX SOFTWARE**

DESCRIPTION: Program starts off by listing Angles plus both helio and geo longitude and latitude. RA and Declination are available too. User may view radix chart on the wheel of houses that includes the Aspectscope in wheel center. At this stage, the user may choose to either look at Transits or Secondary Progressions. The radix Angles and planets are then listed on the left hand side of the screen while the secondary (transit or progressed) positions are given on the right hand side. In the case of Secondary Progressions, the Midheaven is progressed by Solar Arc and the Angles recalculated using the radix geographic coordinates. Also, the user may select to view an Aspectscope (with angles) in screen center. This Scope can be used for analysis of Secondary to Radix positions or Secondary to Secondary positions. At any time, the user may select to look at another transit or progressed date without reentering the radix birth information.

Additionally, progressed aspects due within any selected year will be listed out to screen with the data on which that aspect is exact.

PRICE: \$50.00



**TITLE: URANIAN PLANETS****PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Program computes the nine standard planets, Moon, and Lunar Node plus the Uranian or TNP's: Cupido, Hades, Zeus, Kronos, Appollon, Admetos, Vulcanus, and Poseidon. The system also calculates the Koch House cusps and provides these with planets in correct houses. In addition, a complete Aspectoscope is included for all planets.

**PRICE: \$50.00**

**TITLE: URANIAN PRINTING PACKAGE****PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** Computes a complete radix chart housing all of the Transneptunian planets: Cupido, Hades, Zeus, Kronos, Appollon, Admetos, Vulcanus and Poseidon. Up to three extra pages of data are also available. Contained in the package is:

- Geocentric or Heliocentric mode is operative (user selected). Here is an opportunity to experiment with Transneptunians in heliocentric as well as geocentric mode.

- Complete Horoscope Calculated for any place in the world for dates of the twentieth century with AA2 accuracy. Retrogrades indicated.

- Two House Systems built in: Meridian and Equal. Other systems available by special order to replace Meridian.

- Other built in House Type Options include Zero Aries on Ascendent, Solar Houses (Sun on Ascendent), User input Ascendent.

- Astroglyphs for standard and Uranian planets are available for this program on the Commodore printers and on the Epson MX-70 and MX-80 FT with graphics.

- Transneptunians calculated using the recent orbital element determinations of James Neely. These represent the most accurate positions for the Uranian bodies to date.

- Planets proportionally placed in a round wheel. User has option to fade out chart wheel spokes and have the European style wheel for aspect drawing with colored pencils.

- Table with planet abbreviation or symbol and name (spelled out) along with the position and retrograde status. Declinations are also given. Table makes it easy for beginners to learn the Transneptunians.

- Choice of up to three separate extra pages of printout. User may select one, two, three pages, or only the chart wheel page.

- Complete Midpoint Sort Page contains all midpoints for Standard and Uranian planets and the Angles: Midheaven and Ascendent. The sort also contains the radix planets positions and all twelve house cusps- for easy pictures and reference. The sort fills an entire page and any Dial may be selected.

- Angular Separations and Aspects. A second page is available that gives all planetary pairs starting with sun/moon, sun/mercury et cetera. Aspects are indicated when present and angular separations (degrees and minutes) where no major aspect is in effect. Midpoints are included next to the planet pairs for quick reference.

- Aspects by Type. A third page contains all of the major aspects sorted by kind starting with the Conjunctions. In addition, each kind of aspect is ordered with the tightest aspect at the top of the list. In this way, it is possible to locate the really exact aspects quickly. Aside from the major aspect listings, the remaining planets are sorted in order of increasing angular separations so that the finer aspects can be found quickly. Provides all of the basic information used by the Uranian astrologer in easy to read format. Best of all, the entire printout is available to you in minutes as opposed to hours.

**PRICE: \$150.00**



## PROGRAMMING AIDS/UTILITIES

### APPLESOFT UTILITIES

##APPLEPRINT## USING	PA-1
A.C.E. (APPLESOFT COMMAND EDITOR)	PA-1
ADVANCED X-TENDED EDITOR (AXE)	PA-1
AMPER-INTERPRETER UTILITIES	PA-2
AMPERSOFT PROGRAM LIBRARY VOLUME 1	PA-2
APLUS	PA-3
APPLE CONCORDANCE	PA-3
APPLE II UTILITY PACK	PA-3
APPLE SACK 4- UTILITY PAK	PA-4
APPLE SPICE	PA-4
APPLE-AIDS	PA-4
APPLESOFT II UTILITY I	PA-4
APPLESOFT LINEFINDER	PA-5
APPLESOFT PLUS STRUCTURED BASIC (APLUS)	PA-5
APPLESOFT PROGRAM OPTIMIZER (AOPT)	PA-5
APPLESOFT PROGRAMMER	PA-5
APPLESOFT UTILITY PROGRAMS	PA-6
APPLICATION TEXT EDITOR	PA-6
B.E.S.T.	PA-6
BASIC A+	PA-7
BASIC OPTIMIZER	PA-7
BROWNPAC I	PA-7
BUILD USING	PA-7
DAKIN 5 PROGRAMMING AIDS 3.3	PA-8
EPF IV	PA-9
FORM-DS	PA-9
GLOBAL PROGRAM LINE EDITOR	PA-10
LIST MASTER	PA-10
LISTPRO	PA-10
MACRO SCED (SCREEN EDITOR)	PA-11
PBASIC-DS	PA-11
PRINT II	PA-11
PROGRAM CONTROLLER	PA-11
PROGRAM LINE EDITOR	PA-11
PROGRAMMER'S UTILITY PACK	PA-11
QUICKTRACE	PA-12
RENUMBER AND APP	PA-12
REVIVE	PA-13
SLOW LIST/STOP LIST	PA-13
SOFT-STEP	PA-13
SPEED-DS	PA-14
SUPER APPLE BASIC	PA-14
SUPEREDIT	PA-14
THE ROUTINE MACHINE	PA-14
TOUR ROUTINE GENERATOR	PA-14
UNLISTABLE BASIC	PA-15
UTIL-DS	PA-15
UTILITY CITY	PA-15

### ASSEMBLERS

6502 DEVELOPMENT SYSTEM	PA-18
6502 DISASSEMBLER	PA-18
6502 MACRO ASSEMBLER	PA-18
6502-C PROCESSOR MODULE	PA-18
8080 SIMULATOR	PA-18
ALD SYSTEM II	PA-19
APEX	PA-19
APPLE A.L.D.S.	PA-19
APPLE II 6-CHARACTER EDITOR/ASSEMBLER	PA-19

APPLE-80 . . . . .	PA-20
APPLEBUG . . . . .	PA-21
APPLETEXT - AN APPLE II DISASSEMBLER . . . . .	PA-22
ASM/65 EDITOR ASSEMBLER . . . . .	PA-22
ASSEMBLER TEACHER . . . . .	PA-23
ASSEMBLY LANGUAGE DEVELOPMENT SYSTEM . . . . .	PA-23
BUGBYTER . . . . .	PA-23
CLONE ASSEMBLER . . . . .	PA-24
CO-RESIDENT ASSEMBLER . . . . .	PA-24
COSAPPLE . . . . .	PA-24
CRAE 2.0 . . . . .	PA-25
DATASM/65 EDITOR/ASSEMBLER . . . . .	PA-25
DISASM/65 . . . . .	PA-25
DOSOURCE 3.3 . . . . .	PA-26
DOWN DATER . . . . .	PA-26
DSA-DS . . . . .	PA-26
EDIT 6502 . . . . .	PA-26
JOHN'S DEBUGGER RELEASE II . . . . .	PA-27
LISA 2.5 . . . . .	PA-28
LISA EDUCATIONAL SYSTEM . . . . .	PA-28
MACRO ASSEMBLER TEXT EDITOR (MAE) . . . . .	PA-28
MICROPRODUCTS MDS . . . . .	PA-29
MONITOR EXTENDER . . . . .	PA-30
MUNCH-A-BUG . . . . .	PA-30
RELOCATING LINKING LOADER . . . . .	PA-31
SIMULATORS . . . . .	PA-32
THE BUG . . . . .	PA-32
TRANSLATOR . . . . .	PA-32
WOZPAK II . . . . .	PA-32
XREF/65 . . . . .	PA-32

## COMPILERS

APPLESOFT COMPILER . . . . .	PA-33
EXPEDITER II + . . . . .	PA-33
FLASH! . . . . .	PA-34
HAYDEN APPLESOFT COMPILER . . . . .	PA-34
PBASICS-DS . . . . .	PA-35
SPEED STAR . . . . .	PA-35
THE INTEGER BASIC COMPILER . . . . .	PA-35

## DISK UTILITIES

128K RAM . . . . .	PA-37
AMPER-READER . . . . .	PA-37
AMPER-READER II . . . . .	PA-37
ANIX 1.0 . . . . .	PA-37
APPLE DISK FIXER . . . . .	PA-38
APPLEGUARD . . . . .	PA-38
B-COPY . . . . .	PA-38
BACK IT UP II . . . . .	PA-39
BINARY FILE COPY . . . . .	PA-39
BYTE TRANSCRIBER I . . . . .	PA-39
CATALOG SORTER . . . . .	PA-39
CODEX CATALOG . . . . .	PA-39
CONTROL PROGRAM . . . . .	PA-39
COPY II PLUS . . . . .	PA-40
DAN'S DISK UTILITIES . . . . .	PA-40
DARK - THE DISK REPAIR KIT . . . . .	PA-41
DATACOPE TEXT FILE COPY . . . . .	PA-41
DIRECTORY MANAGER . . . . .	PA-42
DIRECTORY MASTER . . . . .	PA-42
DISC-O-DOC . . . . .	PA-43
DISK CERTIFIER AND COPIER . . . . .	PA-43

DISK DOCTOR . . . . .	PA-43
DISK EMULATOR . . . . .	PA-43
DISK FIXER . . . . .	PA-44
DISK FIXER MONITOR EXTENDER . . . . .	PA-44
DISK ORGANIZER II . . . . .	PA-44
DISK PREP . . . . .	PA-45
DISK RECOVERY . . . . .	PA-45
DISK TEXT EDITOR EDIT-II . . . . .	PA-45
DISK UTILITIES 3.0 . . . . .	PA-46
DISK UTILITY PACK . . . . .	PA-46
DISK ZAP . . . . .	PA-46
DISK-O-TAPE . . . . .	PA-46
DOS 3.3 . . . . .	PA-47
DOS 3.3 UTILITIES . . . . .	PA-47
DOS BOSS . . . . .	PA-48
DOS DATER . . . . .	PA-48
DOS PLUS . . . . .	PA-48
DOUBLE DOS . . . . .	PA-49
DOUBLEBOOT FOR LANGUAGE CARD . . . . .	PA-49
FILE COMPARE . . . . .	PA-49
FILE MAKER . . . . .	PA-50
FILER . . . . .	PA-50
FLEX DOS . . . . .	PA-51
GAF UTILITY PACKAGE 1 . . . . .	PA-51
GAF UTILITY PACKAGE 2 . . . . .	PA-52
HIGH SPEED INIT . . . . .	PA-52
INTRODUCING COPY II PLUS (VERSION II) . . . . .	PA-52
LOCK-IT-UP 4.1 . . . . .	PA-53
MASTER CATALOG V2.0 . . . . .	PA-53
MASTERDISK . . . . .	PA-53
MASTERDOS-DOS CUSTOMIZING DISK . . . . .	PA-54
MCAT . . . . .	PA-54
MEMORY MASTER 1.1 . . . . .	PA-54
MENU ASSORTMENT . . . . .	PA-55
MENU GENERATOR (DISK ORGANIZING SYSTEM) . . . . .	PA-55
MULTI-DISK CATALOG . . . . .	PA-56
MULTIBOOT UPGRADE . . . . .	PA-56
NIBBLES AWAY II . . . . .	PA-56
ONGOING IDEAS DISK UTILITIES 2.1 . . . . .	PA-57
ORIGINAL QUICKLOADERS . . . . .	PA-57
OS/A+ . . . . .	PA-58
PIG-DOS . . . . .	PA-58
PSEUDODISK: A DISK SIMULATOR FOR INTEGER BASIC . . . . .	PA-58
SINGLE DISK COPY . . . . .	PA-58
THE DI SECTOR DISK . . . . .	PA-59
THE MANIPULATOR . . . . .	PA-59
THE UTILITIES DISK . . . . .	PA-59
TRACK & SECTOR LIST . . . . .	PA-59
UNIVERSAL BOOT INITIALIZER 4.0 (UBI 4.0) . . . . .	PA-60

## LANGUAGES

ADVANCED PASCAL . . . . .	PA-61
APPLE FORTH 1.7 . . . . .	PA-61
APPLE FORTRAN . . . . .	PA-61
APPLE PILOT . . . . .	PA-63
BABBLE . . . . .	PA-63
CIS COBOL . . . . .	PA-64
FLEX-FORTH . . . . .	PA-64
FORTH-79 . . . . .	PA-65
FORTTRAN TRANSCENDENTAL ROUTINES . . . . .	PA-65
HAND HOLDING BASIC . . . . .	PA-65
MACROLINK . . . . .	PA-66
STRUCTURED BASIC . . . . .	PA-67

SUPERFORTH . . . . .	PA-67
TRANSFORTH II . . . . .	PA-67

# MISCELLANEOUS

32K RAM . . . . .	PA-68
A.M.P. . . . .	PA-68
ACTION SOUNDS AND HI RES SCROLLING . . . . .	PA-68
AMPERSOFT . . . . .	PA-69
APPLE DOCTOR . . . . .	PA-69
APPLE MECHANIC . . . . .	PA-69
ARCADE MACHINE . . . . .	PA-70
BASIC AID . . . . .	PA-70
BAUDOT TELETYPE DRIVER . . . . .	PA-70
BEAGLE BROS TIPDISK . . . . .	PA-70
BEGINNING BASIC . . . . .	PA-70
CHIPS-TTL & CMOS . . . . .	PA-71
EDIT MASTER . . . . .	PA-71
FORM-IT-OUT . . . . .	PA-71
FORMULA READER . . . . .	PA-71
HEX DEC FOR LANGUAGE CARD . . . . .	PA-72
EP12 PRINTER INTERFACE . . . . .	PA-72
IMAGE PRINTER (EPSON) . . . . .	PA-73
INTEGRITY PLUS . . . . .	PA-73
KEYBOARD RECORDER . . . . .	PA-73
LABEL SPLITTER . . . . .	PA-73
LABORATORY TOOL KIT! . . . . .	PA-74
LITTLE TRICKS . . . . .	PA-74
MEMORY TEST . . . . .	PA-74
MPE (MEMORY-PAGE-EDITOR) . . . . .	PA-75
NUMERIC KEYPAD . . . . .	PA-75
OK 12 PRINTER INTERFACE . . . . .	PA-75
PRINT FILE READER . . . . .	PA-76
PROGRAM UNLOAD . . . . .	PA-76
QUICK CLOCK ADJUST . . . . .	PA-76
RAM TEST . . . . .	PA-76
SCROLL CONTROL . . . . .	PA-76
SLIDE SELECT PROGRAM . . . . .	PA-76
SMARTYPE . . . . .	PA-77
SOFT SEVENTY . . . . .	PA-77
SOUND ON . . . . .	PA-77
SUPER SOUND . . . . .	PA-77
TAPE LOAD AIDS . . . . .	PA-78
THE AUTOMANIAC SYSTEM . . . . .	PA-78
THE BASIC TEACHING PAC . . . . .	PA-78
THE BRAIN SURGEON (A DIAGNOSTIC PACKAGE) . . . . .	PA-79
THE INTEGER FIX . . . . .	PA-80
THE TOOL . . . . .	PA-80
ULTIMATE TRANSFER . . . . .	PA-80
USPEED . . . . .	PA-81
UTILITY BOOK . . . . .	PA-81
UTILITY I . . . . .	PA-81
V.I.P. II . . . . .	PA-82
V-UTILITY . . . . .	PA-82
V.I.P. II . . . . .	PA-82
VC-EXPAND . . . . .	PA-82
VIDEOTERM UTILITIES DISC . . . . .	PA-83
VISIBLEND . . . . .	PA-83
VISIFACTORY . . . . .	PA-83
WIDTH ADJUSTER . . . . .	PA-83



## PASCAL UTILITIES

ABTOOL I . . . . .	PA-84
ABTOOL II . . . . .	PA-84
APPLE PASCAL . . . . .	PA-85
INTEGER PASCAL SYSTEM . . . . .	PA-88
KAREL THE ROBOT . . . . .	PA-89
LINKDISK . . . . .	PA-89
LINKINDEX . . . . .	PA-90
LINKVIDEO . . . . .	PA-90
PAS-LOW . . . . .	PA-91
PASCAL INTERACTIVE TERMINAL SOFTWARE . . . . .	PA-91
PASCAL LEVEL 1 . . . . .	PA-92
PASCAL LOWER CASE . . . . .	PA-92
PASCAL MASTER DIRECTORY . . . . .	PA-92
PASCAL PROGRAMMER . . . . .	PA-92
PASCAL PROGRAMMING TOOL . . . . .	PA-93
PASCAL SOFT-DISK EMULATOR . . . . .	PA-93
PASCAL TOOLS I & II . . . . .	PA-93
PASCAL TRANSCENDENTAL ROUTINES . . . . .	PA-94
PASCAL TUTOR . . . . .	PA-94
PSORT . . . . .	PA-94
UCSD p-SYSTEM . . . . .	PA-95
BRIDGE . . . . .	PA-95

## SORTS

AMPER SORT II . . . . .	PA-96
AMPER-SEARCH . . . . .	PA-96
AMPER-SORT/MERGE (A-S/M) . . . . .	PA-96
DATACOPE SINGLE DISK SORT . . . . .	PA-96
HYPERSORT . . . . .	PA-97
KRAM . . . . .	PA-98
SINGLE DISK SORT . . . . .	PA-98
SORT . . . . .	PA-98
SUPER KRAM . . . . .	PA-99
SUPER SORT . . . . .	PA-99
SUPER SORT & SEARCH . . . . .	PA-100

## APPLESOFT UTILITIES

### **TITLE: ##APPLEPRINT## USING**

**PUBLISHERS NAME: MALIBU MICROCOMPUTING**

**DESCRIPTION:** Give you Apple a flexible print capability like the big machines! Format your output by simply using the print ### ##; variable, statement. ##APPLEPRINT## USING is independent from and does not interfere with the normal Applesoft PRINT statement. Indispensable for financial and business programming. Will pay for itself in no time at all as you save hours of tedious effort formatting reports, lists, tables, etc. Complete instructions and example program included. 32K, machine language for the Apple II Plus.

**PRICE: \$19.95**

### **TITLE: A.C.E. (APPLESOFT COMMAND EDITOR)**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** A co-resident operating system that enhances the immediate mode capabilities of Applesoft. Co-resident means that these routines effectively become part of your Apple II, and that the various commands and utilities are immediately available while entering or modifying existing program lines.

This program features:

- Line editor lets you easily edit program lines: insert or delete right in the line, jump to any point, change only what is needed, then "accept" the line without having the copy over the remainder.
- Instantly determines whether a variable is present in the program in memory, and on which lines it occurs.
- Display values of all non array variables at any time- excellent for debugging programs. Being able to see the order in which the variables were assigned also means you can speed up programs using large numbers of variables.
- Easily convert decimal and hex values back and forth right from the keyboard.
- Auto line numbering (as in integer).
- User defined keyboard macros allow you to define keywords, variables or other strings as a single control character. Best of all, definitions can be entered at any time. This means you do not have to run a separate editor program, and that keys can be redefined on the fly as is appropriate to what you're doing at that moment.
- Any Monitor command can be executed directly from Applesoft, so you'll never have to enter the Monitor again to look at bits of code, or after specific locations. This feature alone will save you hours when linking machine code routines to Applesoft programs.
- B command displays last BLOAD address and length.
- F command gives free space on current disk in drive.
- D gives an ASCII and Hex dump of memory contents starting at a location, allowing you to easily view memory for specific strings, values, etc.

**PRICE: \$29.95**

### **TITLE: ADVANCED X-TENDED EDITOR (AXE)**

**PUBLISHERS NAME: VERSA COMPUTING, INC.**

**DESCRIPTION:** A professional programming aid which provides the user with a text editor style extension to the standard Applesoft operation system. Operation alongside DOS, Monitor and Applesoft, AXE remains transparent to the user until called upon by one of over thirty commands.

-Global search and replacement, including wildcards, selected

changes, and line number reference.

-Full character insert, gobble, and delete.

-Full statement insert and delete.

-Enhanced cursor movement including search ahead and position.

-Two packed list modes.

-Recall editing modes.

-User programmable keyboard macros.

-Four LIST formats, including unique BREAK LIST format for easier reading, understanding, and editing of code.

-Auto line numbering.

-Lower case character entry.

-Resident BASIC program may be run at any time.

-Many more features.

-Development programs quicker and easier, saving hours of programming cost.

Commands are easy, logical and operate in the normal Applesoft entry mode, or in AXE's editing modes. AXE operates on BASIC code as stored in memory by Applesoft. No conversion of code to text is required. In addition, all Apple II DOS and Monitor commands are left fully functional.

**PRICE:**

#### **TITLE: AMPER-INTERPRETER UTILITIES**

##### **PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** Provides an extremely powerful Utility set for your Apple. It uses the Ampersand for emulation of the PRINT...USING instruction for formatting Decimal, Binary, Floating Point, and Hexadecimal printed results. Provides links to also Clear Screen, Clear Page, Bell, Clear Error, and execute ONERR statements.

**PRICE: \$29.95**

#### **TITLE: AMPERSOFT PROGRAM LIBRARY VOLUME 1**

##### **PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** The Ampersoft Program Library is the first in a series of supplementary routine libraries, designed to be used with the main S.D.S. software package, The Routine Machine.

These routines are primarily array centered and are of invaluable use when writing any Applesoft program using numeric or string arrays. Routines work with both 1 and 2 dimensional arrays. Routines included in this package are:

**CLEAR:** Clears an array to 0's (or nulls).

**DELETE:** Deletes any array from memory.

**RENAME:** Renames any array.

**RE-DIM:** Redimensions any array without loss of data.

**SEARCH:** Finds any string within a 2 dimensional array.

**KILL:** Deletes any element/row/column from an array.

**ADD:** Adds on element/row/column to an array.

**FN 1:** +, -, \*, / any number to all elements of an array.

**FN 2:** SIN, COS, TAN, ATN, SGN, INT, ABS, SQR, EXP, LOG.

**RND:** Fills array with random values.

**READ +:** High speed text file read. (4 times faster than normal)

**WRITE +:** High speed text file write.

**SORT:** High speed array sort.

**TIMED INPUT:** Waits for fixed time, then proceeds if no INPUT.

**FORMATTED INPUT:** Input statement with format prompt.

**WAIT:** Waits for definable time period, then proceeds.

**KYBD:** Gets character by direct keyboard scan (no pause).

**HEX POKER:** Puts Hex data directly into memory.

**ARCSIN:** Inverse Sine of all elements in an array.

**ARCCOS:** Inverse Cosine of all elements in an array.

**DEG-RAD:** Convert values in degrees to radian.

**RAD-DEG:** Convert values in radians to degrees.  
**ROUNDING:** Round all elements to a given decimal place.  
**RESTORE +:** Restores DATA painter to any element in the standard Applesoft DATA block.  
**DELIMITED STR\$:** Sort, Search or Display sub-fields within a delimited string.  
**PRICE: \$49.95**

**TITLE: APLUS**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** The original Structured Basic enhancement for Applesoft Basic. APLUS provides the tools that will increase your efficiency, simplify program rewriting, and make your program flow more understandable. No longer do you have to remember the line numbers of subroutines and procedures; instead, just "DO GRAPHIT" and APLUS does the rest. APLUS adds the following structured programming commands to Applesoft basic: WHEN..ELSE..FIN, UNTIL, WHILE, CASE, SELECT, and OTHERWISE. Multi-line IF..FIN statements are also supported. APLUS includes functions to output indented listings to clarify logic flow and converting source code to standard Applesoft commands.  
**PRICE: \$25.00**

**TITLE: APPLE CONCORDANCE**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A Utility for aiding your Program Development, Automatically prepares lists defining where your Program Variables are Used and how they're referenced. Also prepares a Cross-Reference of Program Line Numbers and where they are used.  
**PRICE: \$28.95**

**TITLE: APPLE II UTILITY PACK**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** Routines most used by programmers in one convenient set.  
Renumbering Integer and Applesoft  
New line #'sup to 65535 in either BASIC with user alerted to unusual conditions.  
Append Integer and Applesoft  
easily join program modules together  
Address/Hex Converter  
converts all of the Apple's address formats including high and low order bytes for pointers.  
Line Find- Integer and Applesoft  
Finds the location of any BASIC line in memory for repairing garbaged programs, or inserting HIMEM: CLR etc. directly into a listing  
VAL() and STR\$( )  
Instructions for simulating these Applesoft functions in Integer BASIC. Converts strings to numbers and back again with these  
Screen Page Map  
Put any character anywhere on the screen by "POKE"ing directly into memory the proper values, given by this program.  
MOVE  
Move blocks of memory up or down any number of bytes from Integer BASIC or Applesoft.  
13 pages of documentation explain each program and discuss the internal workings of Integer BASIC and Applesoft.  
**PRICE: Disk \$24.95**



**TITLE: APPLE SACK 4- UTILITY PAK****PUBLISHERS NAME: COMPUTERMART**

DESCRIPTION: Package includes over 30 utility programs that let you really explore the capabilities of your Apple. Includes many of the following- single disk copy, text, ASCII decode, catalog, font, chr\$, convert, dump, fix, DOS, exec demo, init, hi res, memory test, codes, hex, multidisk, name, numbers, pass, wipe, shapes and several more.

PRICE: \$24.95

**TITLE: APPLE SPICE****PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

DESCRIPTION: APPLE SPICE is a set of fast, assembly language routines that alleviate some of the drudgery of writing programs in Applesoft BASIC. APPLE SPICE allows you to concentrate more on your program logic and less on things like "prettifying" the screen and detecting keyboard entry errors. APPLE SPICE also greatly expands Applesoft's capabilities by adding features found in many larger BASICs such as PRINT USING, STRING SEARCH (INSTR), IF-THEN-ELSE, and LINE INPUT.

\*Easy-Patch - Beginners with no machine language knowledge can use it.

\*Excellent tutorial step-by-step manual. Written in easy-to-understand English.

APPLE SPICE is not copy-protected. You may include APPLE SPICE in your commercial programs without additional charge. Just mention that you used APPLE SPICE on your title screen and in your documentation.

APPLE SPICE comes with a clearly written hands-on manual (52 pages) that explains every feature in detail. All of the examples listed in the manual are included on the APPLE SPICE diskette, as well as some user-friendly programs that make it a snap to change APPLE SPICE's parameters and to relocate APPLE SPICE to where YOU want it in memory.

PRICE: \$29.95

**TITLE: APPLE-AIDS****PUBLISHERS NAME: ADVANCED OPERATING SYSTEMS**

DESCRIPTION: A collection of disk-based programming utilities for the Apple II or Apple II+ personal computers.

Consists of 12 programs, written in Applesoft BASIC and machine language, that allow the user to perform many valuable operations easily and reliably.

User can format a data disk, convert a "systems disk" to a data disk, call up an improved directory, see a graphic map of sector usage on the disk, and create or edit execution files. The user can also salvage any recently deleted files or he can copy disks. One unique feature is the ability of the user to manipulate data on the disk easily and quickly. He can load any sector on the disk, examine and alter it, and write it back out to any place on the normally formatted disk. This allows the user to make changes to any file, or even to the operating system itself.

PRICE: \$49.95

**TITLE: APPLESOFT II UTILITY I****PUBLISHERS NAME: POWERSOFT, INC.**

DESCRIPTION: The Applesoft II Utility I program provides the user with the following features. Complete automatic renumbering of any Applesoft II program. The creation of an EXEC File for subroutine file creation. This Feature allows the user to incorporate the same subroutine in various programs. No

modification of the program in machine memory (RAM). Automatic running of the program.

**PRICE: \$ 7.45 Tape**  
**\$12.45 Disk**

**TITLE: APPLESOFT LINEFINDER**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** A utility for locating individual Applesoft program lines in memory. Use for Appending Forbidden Line Numbers, Repairing Programs, Improving Program Efficiency and more. Specifying the Target Line searches for the Start/End memory position. Also produces information on Program Start/End, Hi-Mem, Strings, Free-Space, Variables and Arrays.

**PRICE: \$19.95**

**TITLE: APPLESOFT PLUS STRUCTURED BASIC (APLUS)**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** A 4K machine language utility that adds the following structured programming commands to Applesoft BASIC: When...Else...Fin, Until, While, Unless, Case, Select (variable), and (Otherwise). Multi line If...Fin statements are also supported. Also allows the use of "named" subroutines or procedures. A programmer can now instruct a program to Do Curve Fit subroutine. Automatically indents &Listed programs to clarify the logic flow. The Aplus &Convert command replaces the above structured programming commands with GOTOS and GOSUBS to provide a standard Applesoft program as output. New programs can now be written using GOTO-less logic. Existing Applesoft programs can be maintained using Aplus without special conversion.

**PRICE: \$25.00**

**TITLE: APPLESOFT PROGRAM OPTIMIZER (AOPT)**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** A 2.2K machine language utility that will substantially reduce the size of an Applesoft program without affecting the operation of the program. AOPT automatically shortens variable names, removes REMarks, removes unreferenced lines, appends short lines together, removes extra colons, and rennumbers line numbers. The program works in two parts: (1) compressing the variable names and printing a variable cross reference listing, and (2) removing remarks, renumbering by 1, deleting unreferenced lines, and squeezing multiple short lines into long lines. AOPT will convert a verbose, well documented development version of a program into a memory efficient, more secure production version of the same program with increased speed of operation.

**PRICE: \$20.00**

**TITLE: APPLESOFT PROGRAMMER**

**PUBLISHERS NAME: JOHNNY APPLESEED SOFTWARE AND COMPANY**

**DESCRIPTION:** The APPLESOFT PROGRAMMER will professionally format your screen input and output, so all you have to do is the second part. For each of your inputs you can specify: Whether or not you want the cursor to flash. The maximum number of input characters. Default string or numeric values (entered by hitting RETURN). For numeric inputs you can specify numeric accuracy, if you want commas inserted, the column number for right justification and minimum and maximum values that can be entered.

The APPLESOFT PROGRAMMER will give you complete control over the screen positions of you inputs and outputs, contains lot's of audio and visual feedback and an error handling routine. Enter forbidden characters (comma's, colon's and quotation marks) and add single key commands to all your programs. CTRL-C: CATALOG. CTRL-D: all DONE. CTRL-E: ERROR in input's ESC: RETURN to the main menu. CTRL-X: CANCEL the input line and return the default value. CTRL. P: PRINT any or all screen pages any time you want to (from 1 to 24 lines) including the catalog. You can also use the APPLESOFT PROGRAMMER to develop your programs for commerical marketing. MAKE YOUR PROGRAMMING LIFE A LITTLE EASIER, AND YOUR PROGRAMS MORE PROFESSIONAL.  
**PRICE: \$49.95**

**TITLE: APPLESOFT UTILITY PROGRAMS**  
**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Here's an easier way to write programs quickly and conveniently by using this collection of utility programs. This program tape contains 9 useful subroutines, among them 3 different statement formatters. The REM writer generates a REM statement skeleton which, when filled in, will result in perfectly formatted lines appearing on program listings. The PRINT writer allows you to write several lines of formatted text and also determine where a PRINT line will break. There is also a POKE writer that makes it easier for you to incorporate machine language subroutines directly into BASIC programs. It also eliminates the need to convert each byte of machine language code to decimal notation. Among the other subroutines included is a Hexadecimal/Decimal Converter that enables you to convert numbers from one base to the other to make interfacing to machine language routines easier. Subroutines for line and byte counters calculate the number of lines and bytes in the program and automatically compensate for the length of the utility program. To give your program that professional look, there is a renumber subroutine in BASIC language that lets you renumber the program in any increment. It also checks for illegal branches and indicates where one exists. To combine several programs, there is an append option. And finally, there is a subroutine that enables you to control the speed of listing by using game paddle 0, and to temporarily stop or restart the listing by using the pushbutton on the game paddle.  
**PRICE: \$29.95**

**TITLE: APPLICATION TEXT EDITOR**  
**PUBLISHERS NAME: COMPUTER COMPONENTS, INC.**

**DESCRIPTION:** An upper and lower case text editor that runs in Applesoft II. Major commands are; insert a line, delete a line, change a line, list lines of text with numbers, print to printer, find a line, replace a line with a line, display memory, save and load text to and from tape, and exit the program.  
**PRICE: \$50.00**

**TITLE: B.E.S.T.**  
**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** Our original Applesoft Optimizer (AOPT) has now been enhanced to bring to the Applesoft programmer the most comprehensive set of software tools available today- B.E.S.T. The BASIC ENHANCED SOFTWARE TOOLS is a machine language program to aid in writing, analyzing, and debugging Applesoft BASIC programs. B.E.S.T. will certainly increase programmer efficiency for improved productivity. B.E.S.T. offers: 1) Variable Cross-



Reference, 2) Line Number Cross-Reference 3) A Complete Cross-Reference, 4) Optimize variable names with recognition of both short (two character/Applesoft standard) and long labels, 5) REM Optimizer- with an option to "protect" specified REM statements, 6) Line Optimizer to join short instruction lines of specified length, 7) Merging two programs, 8) Automatic line numbering, and 9) A powerful, yet easy to use Renumber function. Implementation of B.E.S.T. can reduce memory requirements by up to 50% and increase execution speed of Applesoft programs by up to 100%. B.E.S.T. is a low cost alternative to an Applesoft compiler.  
**PRICE: \$40.00**

**TITLE: BASIC A+**

**PUBLISHERS NAME: OPTIMIZED SYSTEMS SOFTWARE**

**DESCRIPTION:** Decimal Arithmetic (10 digits to the penny)  
Syntax check on program entry

Long variable names (all chars. used)

Strings up to 32K bytes in length

Semi Compiled code (no penalty for those long names)

**PRICE:**

**TITLE: BASIC OPTIMIZER**

**PUBLISHERS NAME: BRUCE H. BARBER**

**DESCRIPTION:** Restructures your basic program by eliminating all remarks, condensing code to long strings, eliminating unneeded line numbers and renaming variables. In effect, the Optimizer creates a production program. You will get a 10% to 40% increase in the speed of execution by running your program with all the remarks you need; give your variables meaningful names. After the program is done, let the Optimizer create a fast efficient production version. Integer Basic.

**PRICE: \$19.95 Cassette**

**\$25.95 Diskette**

**TITLE: BROWNPACK I**

**PUBLISHERS NAME: THE COMPUTER EMPORIUM**

**DESCRIPTION:** A utility package for use with Applesoft BASIC in ROM. These routines include several machine language programs which give your BASIC programs such things as PRINT using capabilities, superfast machine language sorting (1000 string items and a numeric array in 5 seconds), automatic disk menu, packing and unpacking of numbers, Hi Res shape utility programs, and much more. Includes eleven utility routines on disk, instruction manual and quick reference chart,

**PRICE: \$39.95**

**TITLE: BUILD USING**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** A powerful machine language utility for Applesoft programs. Includes and easy to use print using routine plus similar functions for strings. Also included are three levels of error trapping, so you can trap and correct numbers or strings that cannot fit in your specified format. You can choose how many decimal places should be displayed for each number to be printed, and you can even fill the leading positions with the character of your choice. For example, you can print the number "157.23" as "157.2", or "0000157.230" or "...\$157.23", or "157 AND 23/100 Dollars", or hundreds of other ways (including exponential formats). Working with strings is just as easy; it's a snap to convert names from "John" and "Doe J.".



Utilities like Build Using are usually difficult to use because they must be located in one memory location (usually between DOS and the DOS file buffers); they cannot be used with your favorite editor or other special routines. Build Using does not have the limitation, as it can be easily located in many different memory locations: 1) the normal between DOS and DOS file buffers, 2) at HIMEM, 3) APPENDED to your Applesoft program, or 4) anywhere else in memory. Appending Build Using to your program is as simple as EXECing a TEXT file. Build Using uses the CALL command thereby leaving the ampersand vector free for your own use.

**PRICE: \$30.00**

**TITLE: DAKIN 5 PROGRAMMING AIDS 3.3**  
**PUBLISHERS NAME: DAKIN 5 CORPORATION**

**DESCRIPTION:** Also compatible with the Corvus Disk Drive system. This 12-in-1 set of utility programs accomplishes the following: THE LISTER - sends BASIC Programs to the printer to be listed, utilizing the full line capacity of the printer. Pagination and page headings, including program name and date, are also provided as additional options.

THE LINE CROSS REFERENCE - produces a display or a printed listing of all lines referenced by GOTO, THEN, GOSUB, LIST, or RUN statements in an Applesoft BASIC program. Cross-referencing of most programs is done in a few seconds. An option allows you to print only the line numbers referenced in GOSUB statements.

THE VARIABLE CROSS REFERENCE - creates a display or a printed listing of all variable names used in an Applesoft BASIC program, showing all line numbers where a given variable name is used.

THE PEEKER - displays or prints either all or selected records from a text file.

THE PATCHER - allows you to display any sector of a given file or program, and then to update any data within that sector. Another option permits you to specify the sector you wish to update such as directory sectors and sectors occupied by DOS.

THE COPIER - copies absolutely ANY type of file or program on a normally formatted diskette from one diskette to another. The name of the program or file is the ONLY information needed.

THE CALCULATOR - adds, subtracts, multiplies and divides very large numbers using numeric string data. The Calculator subroutine (using twenty place accuracy) is written in Assembler code, and runs much faster than an equivalent BASIC subroutine.

THE DISKETTE COPY - is a diskette-to-diskette copy program that does more than just copy. First, the program verifies the input. Then it formats an output disk, copies each track, and checks that the output matches the input. Additional options allow you to either initialize a diskette without DOS, or to create a copy without DOS, thereby increasing storage by 32 sectors. You may even create a copy with a different volume number than the original.

THE ARRAY EDITOR - is a simple word processor that allows you to create, modify, print and save your own text or EXEC files.

THE SCREEN PRINTER - permits contents of the text screen to be sent to the printer at any time the keyboard is active (i.e. the cursor is visible). This Screen Printer program remains in effect until you press RESET or "reboot" the system.

THE PROMPTER - is a data entry subroutine that handles both string and numeric data. You have the option of using commas, decimal points and leading zeros with right-justifies numerics. Alphanumeric data is left justified with trailing spaces added as required. With the Prompter you are also able to specify maximum field length to prevent to prevent overflow in both numeric and alphanumeric fields. You can even define your own set of valid characters.

THE CRUNCHER - removes REM statements, unreferenced (dead) code, and compressed code in Applesoft programs. This will increase the speed of your programs; memory and disk space savings could be more than 45%

Many of these utility programs have been developed and tested for in-house use while producing The Controller business package for Apple Computer Inc.

Each programming aids attractively packaged in a padded, blue print vinyl 3-hole notebook with silver lettering. An identifying tab separates each program for convenient reference.

**PRICE: \$70.00**

**TITLE: EPF IV**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** An extended programming facility for Apple Computers.

Not just another Applesoft editor, EPF IV was designed to be an interactive part of your BASIC programming. EPF IV is divided into four major sections:

**THE APPLESOFT EDITOR**

The "fullscreen" Applesoft editor brings word processor convenience to Applesoft programming. Functions include:

Auto renumber	Macros
Global find and change	Manual renumber
Insert and delete by line or character	

Fullscreen scrolling pages through your program quickly and easily

A sorted cross reference of all variables, line numbers, and labels

Program function keys allow for immediate display of special REM records

**DATA MANAGEMENT SUBSYSTEM**

This function creates a scrollable full screen display of the DOS catalog. You may perform the following functions on the catalog with a single keystroke:

File copy	File delete	File undelete
File clock	File unlock	File verify

You may also easily copy a complete diskette using either a one or a two drive system.

**PROGRAM LIBRARY SUBSYSTEM**

Through simple entries in your program text you may include or copy programs from other DOS files into a target program.

For example, you may build a "new" program by copying in other programs that already exist. Or, at runtime, you may include subroutines that are common to several programs to be used during execution of a new or existing program.

The big advantage of the PLS function is that all subroutines or program segments exist only once on the diskette. Many programs can now "share" those common segments so you save valuable disk space and programming time by assembling a series of routines to make new programs instead of writing them one line at a time.

**EDIT- TIME LABEL BASIC**

Edit Time Label Basic lets you use labels during editing- NOT LINE NUMBERS. EPF IV will keep track of your files and subroutines so that you can devote time to the logic of your program rather than keeping track of its components.

**PRICE: \$79.95**

**TITLE: FORM-DS**

**PUBLISHERS NAME: DECISION SYSTEMS**

**DESCRIPTION:** A complete system for the definition of input and output forms. FORM-DS supplies the automatic checking of numeric

input for acceptable range of values, automatic formatting of numeric output, and many more features.

**PRICE: \$25.00**

**TITLE: GLOBAL PROGRAM LINE EDITOR**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** PLE HAS GONE GLOBAL- Bringing you more power with less effort than before. PLE, has the most popular editor/development tool for the Apple II, now has more new features for faster and easier programming.

**GPLE INCLUDES THESE FEATURES:** (~ = NEW FEATURE)

- \* Global Editing, including search and replace, search and display, and search and edit.
- \* Line Editing, including character insert/delete, pack, find, insert control characters, and more.
- \* System enhancement with type ahead buffer and DOS MOVER.
- \* Escape Functions allowing you to assign any command sequence to any key on the Apple keyboard. Invoke the command thereafter by pressing only ESC then that key.
- \* Integer and Applesoft capability, works on Apple II and Apple II+ Computers
- \* Escape functions edited without running a separate program.
- \* 80 column capabilities, works with most boards.
- \* Automatically uses language card if available.
- \* Invisible and indestructible as part of DOS.
- \* Lower case entry from keyboard.
- \* Control listing by line or page.
- \* Programmable cursor control.
- \* Disk or ROM versions.

**PRICE: \$64.95**

**TITLE: LIST MASTER**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** Provides a number of utilities for performing large scale changes to your program listings in a high speed and automatic way.

Appleseed takes any Applesoft program and optionally removes REMARKS, shortens variable names, combines lines, and rennumbers by ls. Each option can be individually selected or combined to make just the alterations you desire.

Gives you the option of preserving the logical blocks of line numbers that you establish for the various routines in a program. This means that the renumbered version will retain the logic and workability of the original. If you've ever tried to work on a program after you've blindly renumbered the entire thing by 10s, you'll appreciate this feature. Also included are merge routines that allow you to quote blocks of lines from one part of your program to another- with automatic renumbering of appropriate line references.

COMP-LIST will compare to any two Applesoft or Integer programs and list out any lines added, deleted, or changed. This is often handy after you have renumbered or otherwise changed a program and you wish to list out just the changes.

**PRICE:**

**TITLE: LISTPRO**

**PUBLISHERS NAME: ADS**

**DESCRIPTION:** Formats printouts of Applesoft and Integer BASIC program listings for insertion into three ring binders. Listings are provided with page numbers, program titles and dates, right column justification, remarks area, and spotted control



characters.

**PRICE: \$34.99**

**TITLE: MACRO SCED (SCREEN EDITOR)**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** A cursor oriented screen editing tool for the novice as well as for the serious programmer. Commands are executed through Control characters. It works in Integer BASIC or Applesoft (ROM or RAM) and in monitor. This machine language program is completely transparent to the user and only uses 2K of memory. BASIC activation programs and a macro building program are provided. Also available in ROM for use with ROMplu Board from Mountain Computer.

**PRICE: \$49.95**

**TITLE: PBASIC-DS**

**PUBLISHERS NAME: DECISION SYSTEMS**

**DESCRIPTION:** A sophisticated preprocessor for structured BASIC. Use advanced logic constructs such as IF...ELSE..., CASE, SELECT, and many more. Develop programs for Integer or Applesoft. Enjoy the power of structured logic at a fraction of the cost of PASCAL.

**PRICE: \$35.00**

**TITLE: PRINT II**

**PUBLISHERS NAME: COMPUTER SYSTEMS DESIGN**

**DESCRIPTION:** A machine language print formatting program that adds PRINT USING capabilities to the Apple. Uses the Applesoft PRINT command for both formatted and unformatted outputs and will not affect the operation of a standard PRINT statement.

**PRICE: \$24.95**

**TITLE: PROGRAM CONTROLLER**

**PUBLISHERS NAME: HOWARD SOFTWARE SERVICES**

**DESCRIPTION:** A labor-saving utility package for convenient control of program running and listing. Program Controller includes keyboard and paddle control of speed, keyboard control of listing format, rapid cursor control, real-time control of line printer, and easy display of memory pointers. Cassette or disk.

**PRICE: \$39.00**

**TITLE: PROGRAM LINE EDITOR**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Allows fast and easy modification of program lines without retyping the line. With a few keystrokes, insert, delete, or replace parts of a line. Invoke any sequence of commonly used commands by pressing 2 keys.

**PRICE: Disk \$40.00**

**ROM \$60.00**

**TITLE: PROGRAMMER'S UTILITY PACK**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** Set of 11 programs. Appends, Str\$() and VAL() are on printed documentation with the tape version. Programs include Renumber Integer and Applesoft, Append Integer # Applesoft, Line Find Integer and Applesoft, Address/Hex Converter, Screen find, Memory Move, and the STR\$() and VAL() functions simulations for



integer. By using the various programs one can renumber Integer and Applesoft programs with all GOTO's, etc. being renumbered and the user alerted to unusual situations in the program. These include referenced line #'s not in the program, lines referenced by a variable or expression, and a number of others. Line Find allows the user to locate the actual address range of a line in memory so as to be able to insert CLR, HIMEM:, etc. Can also be used on occasion to recover programs garbaged by dropped bits. Address/Hex Converter converts between the Hex, Integer, and breakdown of numbers greater than 256 for use in pointers, etc. Screen Find is used for printing directly on the screen by POKEing appropriate values into the proper locations in memory. Screen Find gives these values and locations when the characters desired and the horizontal, vertical screen positions are input. Memory Move allows one to move blocks of memory up or down any number of bytes from Integer or Applesoft. The Monitor has a routine similar to this but it cannot be used to move blocks up a small distance and it is not possible to use it directly from Applesoft. STR\$( ) simulates the function of this name in Applesoft for use in Integer programs. STR\$( ) in Applesoft converts a number to string. VAL( ) is similar but converts strings to numbers. Includes two cassettes or 1 diskette plus documentation.

**PRICE: \$24.95**

**TITLE: QUICKTRACE**

**PUBLISHERS NAME: AURORA SYSTEMS, INC.**

**DESCRIPTION:** A sophisticated machine language single step trace program. Ideal for:

- Debugging programs that don't work,
- Understanding ones that do,
- And helping to learn machine language.

**Features includes:**

- Transparent to the program being traced. It will not interface with the stack, program, or input/output.
- Single Step mode displays the last instruction, next instruction, registers, flags, stack contents, and six memory locations.
- Trace mode is running display of the single step information with up to nine possible stopping conditions.
- Background operation permits tracing with no output until it is desired. Debugged routines ran at normal speed and background tracing continues until one of nine user definable stopping conditions is met. Then the program returns to single step.
- Changes to register contents, output locations for trace information, stopping conditions, and addresses to be displayed can be accomplished easily in single step mode.
- Relocatable. It will trace a program in any part of memory.
- Compatible with programs using DOS, Applesoft and Integer BASICS, and graphics.
- Compatible with programs using graphics; it displays the graphics while displaying the information in trace or single step mode.
- Can be used from disk or tape in any Apple II computer.

**PRICE: \$50.00**

**TITLE: RENUMBER AND APPEND**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Contains four options: Append, Renumber, Save, and Quit. Append will allow you to join two or more programs together. When you have made your selection of the append utility, instructions will appear on the screen; and when you

press the Return, the cursor will proceed to the next correct line. The Renumber program will ask you for the new starting line, increment what you want, and give you an estimate of how long it will take. You may also renumber newly combined programs, unless the programs you have appended have their line numbers in sequence. Renumber is usually run as the last step in appending another program. If you store your program normally instead of by using this section, you can store this utility as part of your program. Finally, the Quit option stops the utility so you can write an Applesoft program as you usually do.

**PRICE: \$14.95**

**TITLE: REVIVE**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** When a program is wiped out, only the pointers are changed. The program is still in memory, but the Apple doesn't know where to look for it. This program searches through memory and finds the information that enables it to restore those pointers. The only time it won't do this is when a program is lost because the disk has been rebooted, power to the computer has been momentarily interrupted, or the area where the old program resided in memory has been overwritten by a new program. Load Revive at any time, before or after you have entered an Applesoft program, or before or after you have accidentally erased the program. It will be available for as long as you need it, provided your program doesn't write into the section of memory where it resides, and provided also that you don't turn your Apple off. So, don't panic. Remember, Revive gives you back what you almost lost.

**PRICE: \$19.95**

**TITLE: SLOW LIST/STOP LIST**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Did you ever finish writing a program in Integer BASIC or in another language and then want to look back at what you've written? Normally for BASIC, you could type the word LIST and then watch your program go by at a speed too fast to read. But with SLOW LIST/STOP LIST you can start, stop, and control the speed of the listing simply and easily with Apple II's game paddles. You can also control the speed at which the disk catalog appears and even terminate the Catalog operation in the middle. And the program can be enabled and disabled under software control.

**PRICE: \$10.95**

**TITLE: SOFT-STEP**

**PUBLISHERS NAME: ACCENT SOFTWARE**

**DESCRIPTION:** Interactive debugger for Applesoft Basic programs. Its advanced features allow you to:

- \* Single step through your basic program, statement by statement, pausing to allow you to examine or define variables or memory.
- \* Set breakpoints at the line of your choice; the program will pause there and await your command.
- \* Predefine a command to print or define memory or variables automatically whenever the debugger pauses.
- \* See the line to be executed next, automatically, if you wish. No guessing or printout required!
- \* Trace all lines, or only the ones you are interested in. Much clearer and more versatile than the built-in Applesoft trace.
- \* Print the value of any variable or Peek at any memory address whenever the debugger has paused for your command.

\* Let a variable change its value, or Poke values into memory.  
**PRICE: \$49.95**

**TITLE: SPEED-DS**

**PUBLISHERS NAME: DECISION SYSTEMS**

**DESCRIPTION:** A routines to modify the statement linkage in an Applesoft program to speed its execution. Improvements of 5 to 20 percent are common. As a bonus, SPEED-DS includes machine language routines to speed string handling and reduce the need for garbage clean up.

**PRICE: \$15.00**

**TITLE: SUPER APPLE BASIC**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** (Lutus) A structured BASIC that compiles into an optimized Applesoft or Integer BASIC program, 05409, Apple II Disk.

**PRICE: \$39.95**

**TITLE: SUPEREDIT**

**PUBLISHERS NAME: MICROCRAFT SYSTEMS, INC.**

**DESCRIPTION:** Full screen editor - Single keystroke commands - Uses standard text files - Move cursor by character, line or page - Block move and copy - Search and replace - Macro capability - Plus extra software: SuperEdit 56 x 27 provides 56 x 27 character screen for Apple II - And more.

**PRICE:**

**TITLE: THE ROUTINE MACHINE**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** ROUTINE MACHINE does all the work for you- no knowledge of machine language programming, whatsoever, is required. Simply choose the routine you need from an ever-growing library, and Routine Machine will effortlessly put them in your program, and all done transparently! No need to be aware of or bother with BLOAD's, HIMEM:, etc.

Best of all, with just this starter package, you'll have the routines to put High Resolution graphics and sound in your programs immediately! Also included is a versatile "Print Using" module to banish the "decimal point demons" forever! To round out the package, we've also included powerful search and sort routines (for single dimension arrays; Search: 1000 elements in 1 second, Sort: 1000 elements in 90 seconds), and a number of other often-needed routines as well.

**OUR GUARANTEE**

IF YOU DON'T SAVE MORE THAN THE PURCHASE PRICE OF 'ROUTINE MACHINE' IN YOUR OWN PROGRAMMING TIME IN THE FIRST 30 DAYS YOU OWN IT, SIMPLY RETURN IT FOR A COMPLETE REFUND, NO QUESTIONS ASKED!

**PRICE: \$64.95**

**TITLE: TONE ROUTINE GENERATOR**

**PUBLISHERS NAME: MPA ENTERPRISES**

**DESCRIPTION:** Will write the basic code to create a tone generator at any legal pace in memory. The basic code will be line numbered as requested by the user. The resulting routine can then be added into any other Apple program that requires a tone generator.

**PRICE: \$10.00**



**TITLE: UNLISTABLE BASIC****PUBLISHERS NAME: PYGMY PROGRAMMING**

DESCRIPTION: Unlistable BASIC is a machine language program that makes your Integer Basic program listings unintelligible. It is only available on disk. Once a program has been "Unlisted", it can be saved to either tape or disk like any other BASIC program. Here is an example of what the program does.

```
Original - 10 Call -936
           20 Text
           30 For X=1 to 100
           40 Print "Here"
           50 Next X
           60 End
```

Unlisted -

```
10 Call -936 HIMEM: SAVE*HIMEM: TEXT HIMEM:, OR HIMEM: FOR X=1 TO
100 HIMEM: NEW HIMEM: PRINT "HERE" HIMEM: CON PDL HIMEM: NEXT X
HIMEM: SAVE ASC (HIMEM:END
```

The finished "Unlisted" program is the same length as the original and its running is unchanged.

**PRICE: \$39.95**

**TITLE: UTIL-DS****PUBLISHERS NAME: DECISION SYSTEMS**

DESCRIPTION: A collection of several machine language utility routines and one Applesoft utility routine. The Applesoft utility is a sophisticated formatting routine for numeric output. The routine converts numeric values into a character string for printing. The user of the routine specifies the maximum length of the resulting string and the number of decimal places to appear in the result. Positive and negative numbers can be converted by the routine. Commas are inserted in the integer portion of the number. The machine language utilities consist of several routines to improve the error handling capabilities of Applesoft programs (e.g. resume execution at the statement following the one in error), a machine language to Applesoft interface utility, a routine to selectively clear arrays and a routine for loading machine language programs into RAM along with an Applesoft program.

**PRICE: \$25.00**

**TITLE: UTILITY CITY****PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE**

DESCRIPTION: FOR YOUR BIG APPLE - UTILITY CITY is a useful and entertaining collection of 21 Applesoft utilities, programmed with style by Beagle Bros. Here is the entire list:

**BIGLINER--**

Lets you renumber Applesoft program lines to 65535 to make them inaccessible. Protect your copyright message or subroutine at the end of your programs. Also lets you down-number lines greater than 63999.

**FILENAME ZAP--**

Lets you create trick file names, from inverse to flash to INVISIBLE; great for making files inaccessible or for dressing up your catalog display.

**SCREENWRITER--**

A unique design tool that lets you compose and format Apple text layouts (title pages, menus, displays, etc.) directly on your monitor. Type directly in inverse, flash & normal, and upper & lowercase. The cursor is easily moved in any direction. Words on the screen may be re-set centered or flush left or right.



Blocks of copy are easily moved. Finished layouts may be dumped to printer or stored on disk.

#### MULTI-CAT--

Lets you send long catalogs to your printer or CRT in multiple columns (3, 4, 5, etc.) and in any column-width (40, 80, etc.). File & sector codes may be included or omitted. Organize your disk library!

#### TEXT DUMP--

Transfers your text screen to your printer. May be used alone or appended to a program.

#### SOFTFILE--

Lets you sort, store, and update lists, class rosters, etc., on disk. Listable, changeable and customizable.

#### RUN COUNTER--

Appended to programs to post on the screen the number of times the program has been run, each time it's run.

#### DATE COUNTER--

Similar to Run Counter; reports the last DATE on which a program was run.

#### REM ZAP--

Makes rem statements temporarily inverse in your listings until the next PR#O or reset.

#### LINE SEARCH--

Finds Applesoft program lines in memory for crashed-program repair or "illegal" alteration. Both hex and decimal addresses are reported.

#### KILL-CAT--

Lets control-C (or any key you choose) make a clean break in a long catalog. Any other key continues as usual. Easily appendable to your greeting program.

#### XLISTER--

A re-formatted list utility that turns a confusing-looking Applesoft listing into a set of clear step-by-step instructions. After loading your program, you simply type "EXEC XLISTER" and enter the range of lines you want listed (all or part of your program). Each program statement is then listed on a new line, properly spaced in the chosen column-width, with every statement following an "IF" called out, and FOR-NEXT loops indented (ala Pascal). Xlister is perfect for de-bugging; errors seem to surface in this clear new format. Also use Xlister for making archive printouts (with page breaks!) of your work.

#### INT-CONVERTER--

Automatically converts Integer programs into Applesoft.

#### HEX/DEC/BIN CONVERTER--

Convert from or to hex while your current program stays intact. Accepts positive or negative decimal or hex input and reports hex, positive & negative decimal and binary equivalents.

#### DOUBLE LOADER--

Allows you to run any Applesoft file while your current program stays intact (no need to save, load and re-load). Make your own utilities more useable!

#### CONNECT--

Appends Applesoft programs together or attaches your favorite subroutines to your programs without retyping.

#### COMMAND ZAP--

Lets you put INVISIBLE functioning Applesoft commands into your listings (for program protection) and create attractive flush left list headings with line numbers and the word "rem" hidden.

#### CHR\$ POKER--

Finds text screen locations and values for poking any character in any format directly onto the screen.

#### BFIND--

Reports the most-recently BLOAded binary file's start address and length in hex and decimal. An EXEC file; no need to re-load.

**ADDRESS CHECKER--**

An interesting little "snooper" utility that let's you experiment with and explore Apple's memory.

APPLE TIP BOOK #3 includes complete easy-to-follow instructions and discussions of how each Utility City program works as well as a whole NEW collection of Apple tips, tricks and program listings (48 pages total).

**PRICE: \$29.95**

## ASSEMBLERS

### **TITLE: 6502 DEVELOPMENT SYSTEM**

**PUBLISHERS NAME: MICROPRODUCTS**

**DESCRIPTION:** Contains a Text Editor, Assembler, Disassembler, and Symbolic debugger.

Available on EPROM with socket adaptors to replace Integer Basic and convert the Apple Computer to a dedicated 6502 Development Tool. Supplied on a Firmware Board that will plug into slot 0.

The Text Editor supports the entry and maintenance of 6502 assembler Text Files. Commands include: Auto line numbering; LINK multiple Text Files with forward and backward pointers; Locate and Replace labels; List file or selected line NO.s; Text file scrolling, delete line or range of lines; Execute monitor and DOS commands; Load text file from disk; Save text file to disk or portion of text file; 40 and 80 character Print commands. The Assembler has been designed to process all 6502 Opcodes designated by MOS Technology as well as the following pseudo opcodes: ORG; OBJ; EQU; EQD; DFD; CAL call statement used when linking; ENT enter statement used when linking.

The Disassembler will disassemble a specified portion of machine resident code and produce a Text file that is compatible with the Assembler. A special Dump command is included that allows you to dump memory onto the CRT, listing both the Hex and ASCII values starting at any location.

The Debugger is a powerful programming aid that will assist in developing, debugging, and testing machine language code. The Debugger executes a program stop by stop and displays each instruction along with the Microprocessor's registers as well as values (both in Hex and ASCII) contained in up to 500 user selected memory locations (locations can be selected by Label as well as Hex). Two Modes are supported. Trace and Step with many user specified parameters including External Breakpoints.

**PRICE:**

### **TITLE: 6502 DISASSEMBLER**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** (Stamm) Produce assembly language source files with labeled subroutines and references from programs already in memory. It is compatible with Hayden's ASSEMBLY LANGUAGE DEVELOPMENT SYSTEM.

**PRICE: \$34.95**

### **TITLE: 6502 MACRO ASSEMBLER**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** Extremely versatile. Generates relocatable code. Text editor. Many handy utilities. Comes on cassette but contains everything needed for disk use.

**PRICE: \$50.00**

### **TITLE: 6502-C PROCESSOR MODULE**

**PUBLISHERS NAME: NUMBER NINE, INC.**

**DESCRIPTION:** The module supports one megabyte programmable memory space and features memory management hardware, which enables all 6502 instructions to execute automatically across 64K boundaries, dynamically variable clock, auto-synchronized I/O functions, memory write protect, Booster and Apple Bus DMA, ect.

**PRICE: \$350.00**

### **TITLE: 8080 SIMULATOR**

**PUBLISHERS NAME: SYBEX, INC.**

**DESCRIPTION:** Allows the owner of the 6502 based system to execute 8080 code, thus enabling the use of the wealth of 8080 programs available. In short, this program turns your 6502 into an 8080.

**PRICE: Cassette \$19.95**

**Disk \$29.95**

**TITLE: ALD SYSTEM II**

**PUBLISHERS NAME: INSOFT CORP.**

**DESCRIPTION:** The Assembly Language Development

-Object files to 18K

-Source files to 37K

-Cursor based screen editor

-Upper and lower case text entry

-Nested macro instructions

-Local, global and universal labels

-Comprehensive error trapping

The enormous file capacity of ALD System II assures you of the ability to develop virtually any imaginable software system. And you can do so with ease wince ALD System II edits with the simplicity of a word processor.

**PRICE:**

**TITLE: APEX**

**PUBLISHERS NAME: APPARAT, INC.**

**DESCRIPTION:** Provides users with a complete program development and file management system. The basic package includes a high speed, two pass resident assembler and macro editor. The assembler generates an alphabetized symbol table and a cross reference table, and is capable of assembling over 1900 lines per minute. The editor has 18 commands and 10 text buffers.

**PRICE: \$99.00**

**TITLE: APPLE A.L.D.S.**

**PUBLISHERS NAME: MICROSOFT CONSUMER PRODUCTS**

**DESCRIPTION:** An assembly language development system that provides the capability for programming in three different assembly languages - Z-80, 8080 and 6502 - even within one program. In addition, Apple A.L.D.S. is the only Apple assembly language system with macro capability, relocatability and conditional assembly.

In addition to MACRO-80, LINK-80 and CREF-80, Apple A.L.D.S. includes a powerful 6502 debugger and CPMXFER, a program to facilitate transfer of CP/M files to Apple DOS.

**PRICE:**

**TITLE: APPLE II 6-CHARACTER EDITOR/ASSEMBLER**

**PUBLISHERS NAME: MICROPRODUCTS**

**DESCRIPTION:** This Editor/Assembler follows most of the basic rules and conventions and uses the same opcodes as developed by MOS Technology for the 6502 microprocessor, which is used in the Apple II. This assembler, however, is much more powerful than the Apple factory supplied assembler, and incorporates a powerful text editor.

This program has two pass implementation and incorporates a test editor. This assembler incorporates provisions for calling any printer driver from any location in memory; ROM, RAM, PROM, EPROM. It may operate with Microproducts PR-40 or Centronics 770 printer interface, or other printers and interfaces from this assembler to provide hard copy records of programs when desired.



This assembler also directly supports the Microproducts EPROM programmer. This assembler assembles code at over 3000 lines per minute. The text editor operates in two entry modes; Data entry and Command Mode. 1) When data lines are entered a syntax check is performed on each input line before that line is stored in the text file. 2) In the Command Mode nineteen text editor commands are available: Delete portions of text file, Initialize text file pointers prior to creation of new text file, Enter location of printer drive routine, Return to monitor, Renumber lines, Execute code without entering monitor, Save text file on cassette, Scan text file on disk, Tab function, Concentrate text files, Restore text file pointers if destroyed. The feature which permits the test to be saved on or loaded from magnetic tape or floppy disk, facilitates the exchange of programs amount Apple users allows them to modify programs they receive by loading test file, with comments, into their computer. Stored in the text file with a line number are the labels of subroutines, spaces between labels, mnemonic instructions and labels for temporary storage register in ASCII form. Therefore, every entry from the keyboard plus whatever the assembler inserts in the text file is found in the test file in ASCII form. After the user has completed the origination of the program in the text file, he merely types "ASM" and carriage return and the assembler searches the text file and checks for errors on the first pass. Some of the errors might be; invalid opcode, duplicate labels, undefined labels and branches out of range. etc. Any detected errors are immediately in English along with the line number of the error. Errors may then be readily corrected by returning to the text editor mode. If there are no errors, the object code is inserted in memory in a form which can be executed by the APPLE II.

The assembler had 5 pseudo opcodes. Pseudo opcodes tell the assembler what to do; as opcodes tell the program what to do. Pseudo opcodes appear in the same column as the opcode mnemonics. Pseudo opcodes do not appear in the object code they only appear in the text file editor, but this program permits the information in the text editor to be saved in memory or printed out for future reference.

The assembler can assign a six character mnemonic label to memory locations used as temporary storage registers or assign a six character mnemonic label to subroutines. The advantage here is that it is easier to remember a word related to what the subroutine does than to remember hexadecimal addresses for 20 or 30 subroutines or temporary storage registers. In addition to the memory aiding advantage of the mnemonic labels, comments can be inserted in the text file to make the program more readable.

PRICE: \$29.95

#### TITLE: APPLE-80

PUBLISHERS NAME: DANN MCCREARY

DESCRIPTION: Apple-80 is an 8080 simulator and debug package designed for the Apple II 6502 based computer. Any 16K or larger Apple II can run programs written for the 8080 and can be used as a design and debugging aid for the development of original 8080 software.

Apple-80 provides single-step, trace and run modes and executes all valid 8080 op-codes. Illegal op-codes are rejected. All 8080 registers are visible on the Apples screen and may be modified at will. 8080 I/O port addresses are arranged in a table for each of user modification. Up to 8 breakpoints may be set to facilitate program debugging.

PRICE: Cassette \$22.00

Disk \$29.95

**TITLE: APPLEBUG****PUBLISHERS NAME: MICROPRODUCTS**

**DESCRIPTION:** Applebug is a powerful programming aid and comprehensive software debugging tool that will assist in developing, debugging and testing machine language code on the Apple II. Applebug will also facilitate tracing the logic of existing machine language programs such as the monitor, DOS and Applesoft. Since the Trace and Single Step functions have been deleted in the Apple II+, Applebug can be used to replace those functions. The Applebug is intended for use with the microproducts/Apple II based 6502 development system including Superkim (ICE) in-circuit emulator.

Applebug has been designed to operate as a "stand alone" debug package, or in conjunction with the microproducts 6-character Label Editor Assembly. In either environment, all modes and options are available. However, entries by label name are only possible when Applebug is used in conjunction with the microproducts Assembler and the associated Label Table is available. I/O management commands are included to facilitate the saving and/or loading the Label Table to or from disk or tape.

How a Debugger works-

A Debugger executes a program step by step and displays on the screen and/or prints the values contained in all the microprocessor registers as well as values contained in user selected memory locations (that may or may not be used by the program) for each instruction.

Operational Modes-

There are three Operational Modes: STEP, TRACE and RUN.

1. STEP will single step through a program and display the executed instructions and the associated registers.

In addition to displaying the instruction and registers, virtually an unlimited number of user specified memory locations may also be displayed. These locations may be specified as Hex locations or label names. In addition, breakpoint addresses may be specified.

2. TRACE will trace execution of a program and will display each executed instruction and the associated registers. This command will log each JSR and RTS instruction and the TRACE will end when the final RTS is encountered or any key is depressed.

The Trace mode supports four display options:

Y- Display all instructions, registers and memory locations.

J- Display only JSR, JMP and/or RTS instructions, registers and memory locations.

N- Display no instructions, registers or memory locations. If while in the mode a user specified break point is encountered, the breakpoint instruction will be displayed along with the associated registers.

S- Slow Trace. Delay between instruction display.

3. RUN will run a program with no instructions or registers displayed.

Alternating between Applebug, Assembler and Disassembler-

The Applebug, the microproducts/Apple II Coresident Editor/Assembler and the microproducts/Apple II Disassembler Text File Manager are all loaded into the same area of memory. This means that a machine code program can be disassembled into a microproducts compatible text file and the Assembler can be loaded over the disassembler without disturbing the text file. You can then modify the code and assemble it followed by loading Applebug over the Assembler without disturbing the text file or assembled code. You are now ready to complete the debugging process.

**PRICE:**

**TITLE: APPLETEXT - AN APPLE II DISASSEMBLER****PUBLISHERS NAME: MICROPRODUCTS**

DESCRIPTION: This program translates Apple machine resident code to a text file that is compatible with the MICROPRODUCTS Co-Resident Assembler. This is accomplished in a two pass operation.

1. The first pass creates label statements (.DL) for all external references. The "STAR" statement is also created in this pass.
2. The second pass translates machine instructions to text statements:
  - a. Immediate mode operands are identified.
  - b. Zero page operands are identified.
  - c. Internal references are resolved.
  - d. A .EN statement is created.

Appletext enables the user to create text files from machine resident code. This file may be created for either an entire program or for selected routines. For example, portions of the Apple monitor may be selected, translated and modified using the Co-Resident Assembler. This Modified code may then be programmed on an EPROM using the MICROPRODUCTS EPROM Programmer. Appletext resides at HEX LOCATION 1000 THE TEXT FILE RESIDES AT HEX LOCATION 3600

Instructions for relocating these positions are contained in paragraph entitled 'Relocating Appletext'.

PRICE: \$29.95 Cassette

\$33.95 Diskette

**TITLE: ASM/65 EDITOR ASSEMBLER****PUBLISHERS NAME: OPTIMIZED SYSTEMS SOFTWARE**

DESCRIPTION: ASM/65 is a powerful, 2 pass disk-based assembler for the Apple II Computer System. It is a compatible subset of the FORTRAN cross-assemblers which are available for the 6500 family of micro-processors. ASM/65 features many powerful capabilities, which are under direct control of the user. The PIE Text Editor co-resides with the ASM/65 Assembler to form a comprehensive development tool for the assembler language programmer. Following are some of the features available in the ASM/65 Editor Assembler.

PIE Text Editor Command Repertorie

Disk Based System

Decimal, Hexadecimal, Octal, & Binary Constants

ASCII Literal Constants

One to Six character long symbols

Location counter addressing "\*\*"

Addition & Subtraction Operators in Expressions

High-Byte Selection Operator

Low-Byte Selection Operator

Source statements of the form:(label) (opcode) (operand)  
(comment)

56 valid addressing modes

Equate Directive

BYTE Directive to initialize memory locations

WORD Directive to initialize 16-bit words

PAGE Directive to control source listing

SKIP Directive to control source listing

OPT Directive to set select options

LINK Directive to chain multiple text files

Comments

Source listing with object code and source statements

Sorted symbol table listing



**PRICE: \$69.95 Disk**

**TITLE: ASSEMBLER TEACHER**

**PUBLISHERS NAME: COMPUTER WORKS, INC.**

**DESCRIPTION:** This Apple program will teach you assembler. I assume you know BASIC already, and now you'd like to learn Apple assembler. You need three things (two heavies and a friend)...

1. The Apple II Reference Manual (heavy),
2. A good 6502 assembler manual (ask for both at your Apple dealer), and
3. ASSEMBLER TEACHER, a program that takes you right through the learning barrier!

ASSEMBLER TEACHER will soon have you eating those manuals for breakfast. And you'll never outgrow ASSEMBLER TEACHER, since it has tools an expert can use even more than a novice. Here's how ASSEMBLER TEACHER works:

- \* ASSEMBLER TEACHER prowls your Apple's memory page by page, drawing a map of what it finds.
- \* ASSEMBLER TEACHER shows your CPU running in slow motion on your screen, so you can see exactly what the operations are doing to the registers and the stack ( a great debugging tool).
- \* ASSEMBLER TEACHER exposes the mysteries of hexadecimal, two's complement, character and other data representations, instantly translating from any version to all others.

And best of all, ASSEMBLER TEACHER gives you the concepts you need to cope with assembler, using simple on-line lessons that grab you by the keyboard and make you play your way to knowledge. ASSEMBLER TEACHER is written by a Ph.D. in Computer Science who regularly teaches assembler. Ask for ASSEMBLER TEACHER at your dealer, or order now.

**PRICE: \$44.95**

**TITLE: ASSEMBLY LANGUAGE DEVELOPMENT SYSTEM**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** The Apple Assembly Language Development System is an assembler/editor/formatter which includes a cursor-based editor, global and local labels and diskbased macros which allow incorporation on frequently used subroutines into any program.

**PRICE: \$39.95**

**TITLE: BUGBYTER**

**PUBLISHERS NAME: COMPUTER ADVANCED IDEAS**

**DESCRIPTION:** Who needs BugByter?

- Apple users who want to learn machine language.
- Apple programmers in need of a complete 6502 debugging tool.
- Educators who need to demonstrate the operation of the Apple's central processor.
- Software professionals who need to display and control all 6502 registers.

**FEATURES INCLUDE:**

- \* All registers displayed
- \* Compatible with all Apple languages
- \* Completely relocatable
- \* Full hex and ASCII I/O
- \* Multiple options while in trace mode
- \* Literal and transparent breakpoints
- \* Resident assembler
- \* Resident disassembler
- \* User-definable screen



- \* Ram screen dump in hex and ASCII
- \* Comprehensive documentation
- \* Single keystroke operation
- \* Instruction cycle counter
- \* Hexadecimal/decimal conversions
- \* Can run in add-on ram card

**PRICE: \$39.95**

**TITLE: CLONE ASSEMBLER**

**PUBLISHERS NAME: CLONE SOFTWARE**

**DESCRIPTION:** You get both a disk based line oriented text editor and a 6502 Assembler. Since the text editor is a separate program, it can be used for other purposes than editing source code for the assembler. Specially designed for medium to large programs, this assembler also helps reduce debugging time through its cross reference feature, which lists not only the value of each symbol, but also the number of each line which references it.

Operates only under the 13 sector format (also usable with the new 16 sector format by means of the BASICS disk). The source code for the editor and assembler are available for your own requirements.

**PRICE: \$39.95**

**TITLE: CO-RESIDENT ASSEMBLER**

**PUBLISHERS NAME: COMPUTER COMPONENTS, INC.**

**DESCRIPTION:** This is a two pass assembler with text editor. Features include save and load text file from magnetic tape, and sic pseudo op codes.

**PRICE: \$19.95 Cassette**

**\$25.00 Diskette**

**TITLE: COSAPPLE**

**PUBLISHERS NAME: DANN MCCREARY**

**DESCRIPTION:** An 1802 Simulator and Debugger software package designed to run right on your Apple II 6502 based computer. Now any 16K or larger Apple II can run programs coded in 1802 machine language and can be used as a development aid for checking out modest 1802 applications.

**Features:**

- Runs on any 16K or larger Apple II computer, creating a virtual 1802.
- Provides Single step, Trace and Run modes.
- Runs 1802 object code from \$1000 hex to the top of available memory.
- All 1802 registers visible on screen in Trace and Single step modes.
- Trace speed is dynamically variable, controlled by Paddle 0 setting.
- 1802 I/O ports and Q arranged in tables for ease of assignment by users.
- Set up to 8 nondestructive breakpoints for easy debugging.
- 1802 Interrupt and 4 External Flags simulated by control keystrokes.
- Call 6502 subroutines directly from your 1802 programs, enabling full use of the Apple II Monitor routines or your own special subroutines.

Allows the study of 1802 architecture and programming techniques on the same hardware being used for 6502 studies.

The complete Cosapple package is in three parts. First, the Cosapple manual which provides the necessary documentation for

disassembly any code segment. Disasm/65 lets the user input the disassemble parameters, thus avoiding undefined instruction sequences encountered while using the minidisassembler found in the Apple Monitor.

**PRICE: \$24.95**

**TITLE: DOSOURCE 3.3**

**PUBLISHERS NAME: LAZER SYSTEMS**

**DESCRIPTION:** We disassembled Apple's DOS 3.3 with our popular DISASM/65 disassembler program, added meaningful labels and comments, and came up with DOSOURCE 3.3. Lazer's DOSOURCE clearly lists all the routines used within Apple's DOS removing the mystery that surrounded DOS 3.3 until now.

Gives you the full details of Apple DOS internal operation. Never before have the internals of Apple's DOS 3.3 been so explicitly explained. Now professional programmers, hackers, and the curious can really know what goes on inside DOS.

Provided on two disks, in three formats: A LISA 2.5 compatible source listing that can be converted for use by other assemblers, and an assembled listing showing all the addresses and hex values within DOS.

With DOSOURCE you can:

- Reassemble DOS at different address (for example: the language card).
- Optimize portions of DOS for higher performance.
- Utilize several useful routines found within DOS.
- Remove unneeded portions of DOS for applications programs. If your application program doesn't require the use of INIT, BLOAD, BRUN, etc. why should you have to live with the memory overhead required by these routines?
- Learn all kinds of neat programming tricks.
- Patch DOS 3.3 and fully understand the ramifications of the patch.
- Write your own DOS
- Become a DOS expert.
- Write truly useful and universal DOS utility programs.

**PRICE: \$39.95**

**TITLE: DOWN DATER**

**PUBLISHERS NAME: APPLE VALLEY SOFTWARE, INC.**

**DESCRIPTION:** Compares two versions of same program- logs the difference of a text file and at same time to your printer.

With the text file another person can update his old program by EXECing it to his program.

**PRICE: \$15.00**

**TITLE: DSA-DS**

**PUBLISHERS NAME: DECISION SYSTEMS**

**HARDWARE REQUIREMENTS: ROM or Language Card**

**DESCRIPTION:** A disassembler for 6502 code. Now you can easily disassemble any machine language program for the Apple and use the disassembled code directly as input to your assembler. Disassembles instructions and data. Produces code compatible with the S-C Assembler (version 4.0), Apple's Toolkit assembler and others.

**PRICE: Disk \$25.00**

**TITLE: EDIT 6502**

**PUBLISHERS NAME: LJK**

supported by LETTER PERFECT. Lower Case optional with LCG.  
**PA-26**

**DESCRIPTION:** This is a coresident- two pass Assembler, disassembler, Text Editor, and Machine Language Monitor. Editing is both character and line oriented. Disassemblies create editable source files with ability to use predefined labels. Complete control with 41 commands, 5 disassembly modes, 24 monitor commands including step, trace, and read/write disk. Twenty pseudo opcodes, allows linked assemblies, software stacking (single and multiple page) plus complete printer control, i.e. pagination, titles and tab setting. User can move source, object and symbol table anywhere in memory. Feel as if you never left the environment of BASIC.

**PRICE:**

**TITLE: JOHN'S DEBUGGER RELEASE II**

**PUBLISHERS NAME: BRODERICK & ASSOCIATES**

**DESCRIPTION:** Begin tracing or stepping from any point in your program.

Find next status equal zero condition

Now you can begin tracing or stepping from any point in your program. Just insert a 'JSR\$9040' anywhere in your program and the debugger will be activated from this point on and you can use all the trace & step options. I use this for all of my HI-RES graphics work - it automatically turns graphics off and text on for the debugger.

The debugger places 3 "NOP"s over the JSR \$9040 so tracing can follow your program logic flow. Enter a 'J' to put the JSR \$9040 back in your program if you wish to debug again, otherwise, the JSR will not be there and you can test your program again without debugging on.

Find next status equal zero condition. Enter 'E' in the step mode and the processor will execute all instructions without debugging until it finds the status equal zero condition and then turn debugging control over to you again. This is a good way to move quickly through your program.

Now displays: BEFORE/AFTER in MEMORY \$XXXX (Effective Address). Using labels are really not necessary anymore since the step move will now automatically display what is in every memory position which is referred to by every instruction both before and after execution. The memory effective address is computed and displayed for all addressing modes.

You will also notice that the debugger now loads from \$8400 to \$9600 instead of from \$8600 to \$9600. Everything else remains unchanged. Applesoft is not necessary for using John's Debugger unless you wish to use the labels. I myself never use them since BEFORE/AFTER displays more information that I need for debugging. For machine & assembly language programmers (beginners & advanced) PERFORMS FUNCTIONS: TRACE, STEP, BREAKPOINT.

I am happy to announce the release of "JOHN'S DEBUGGER" which is a 4000 byte machine language program which will step or trace through any machine language instruction located anywhere in memory. The trace and step modes can be used interchangeably while debugging.

The trace mode will follow the logic path instruction by instruction displaying the effective address, the opcode, and the disassembled opcode - all logic changes are noted by skipping spaces. Tracing can be by line, by page or continuous and can also be printed if you wish.

During tracing you can enter the step mode where the debugger displays all registers, status and pointer plus the accumulator in binary, the last eight bytes pushed onto the stack, an easy to glance at display of all flags set, and a display window into 12 memory positions with labels which can be set up with up to 8 window into 12 memory positions with labels which can be set up

with up to 8 characters long for each label.

Both modes trace and step allow the temporary pause in execution so memory can be examined or changed and then return to continue with processing.

Incorporated in JOHN'S DEBUGGER is an excellent breakpoint program which when activated (JSR breakpoint) will display all of the same information that is displayed in the step mode. The breakpoint program had an easy to use timing delay routine which can slow up processing from 0.1 to 200 seconds and can be set with three options depending on how the delay routine is used. Breakpoint can be activated by break on keypress, cycle counter, always break or never break. All three modes save and restore the entire page of the stack.

**PRICE:**

**TITLE: LISA 2.5**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** Assembly Language Development System for Apple Computers.

LISA 2.5 is a proven method for 6502 Assembly language development that has been in use in the homes and offices of both novice and professional programmers for over two and a half years.

Features...

Easy to learn commands

Speedy Assembly: over 20,000 lines/minutes.

Co-Resident Editor and assembler. No waiting on disk loads.

More extended mnemonics (a greater memory aid).

More commands which allow the flexible use of DOS.

**PRICE: \$79.95**

**TITLE: LISA EDUCATIONAL SYSTEM**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** A complete Assembly language development system written for the Applesoft programmer who is interested in achieving a higher level of efficiency than is possible with BASIC.

The system is designed to help the Applesoft programmer to produce machine language code almost immediately and promotes a greater understanding of the computer and Assembly language.

The LISA Educational System contains:

"USING 6502 ASSEMBLY LANGUAGE"

A book written by Randy Hyde that takes you step by step through an easy explanation of how Assembly language works, and how to utilize its speed.

**SPEED/ASM**

A very powerful assembly language tool that gives the BASIC programmer the ability to build complex assembly language programs. Forty pages of well written, informative documentation explain how you can use SPEED/ASM (and your knowledge of BASIC) to easily translate your BASIC programs into Assembly language on a line by line basis.

LISA 2.5

A proven method for 6502 assembly development. LISA features easy to use commands and speedy assembly (over 20,000 lines/minute). The LISA Educational System is designed around the use of the LISA assembler as the programmers prime tool.

**PRICE: \$119.95**

**TITLE: MACRO ASSEMBLER TEXT EDITOR (MAE)**

**PUBLISHERS NAME: EASTERN HOUSE SOFTWARE**

**DESCRIPTION:** A machine language development package for use on  
**PA-28**



the 48K Apple and single or multi Disk drives. If you are looking for a professional development tool that can greatly increase your productivity or that of your programming staff, then MAE is the answer. You may even come to enjoy the laborious task of machine language programming when you use this high quality development tool which was designed to be fast, efficient and easy to use. We think you will find that the convenience, time savings and increased productivity provided by MAE will more than justify its cost. Examine these features:

- Works with DOS 3.2 or 3.3.

- MAE was written entirely in machine language- not in BASIC like some assemblers we know of. Thus you get very fast and accurate assemblies.

- Coexists with BASIC.

- 38 error codes, 27 commands, 26 pseudo ops, and 5 conditional assembly operators.

- Occupies less than 11K of memory starting at 5000 hex.

- Has built in software UART (110-9600 baud) which can drive an external device. Example: An 80 column/line external CRT. MAE can also direct output to standard Apple printers or to non standard printers via the built in printer driver or a user provided printer driver.

- Operates entirely with disk; no tape operations are supported.

- Macro, Conditional Assembly, and Interactive Assembly capabilities.

- Sorted symbol table with labels up to 31 characters long.

- Optionally creates executable object code in memory or relocatable object code on disk.

- Command strings can be passed to Apple DOS.

- A simplified Text Processor (STP) is also included which adds the capability to right and left justify, center lines of text, set margins, define text body shapes, titles, footers, and many other text processing features.

- Optionally, both the MAE and the STP work with the M&R Enterprises Sup'R'Terminal board to provide upper and lower case characters and page width displays on the CRT. It is also possible to use other types of lower case hardware modifications with this software.

- A software lower case provision is also included for Apple systems without lower case hardware. When the text file is formatted, both upper and lower case characters are sent to the printer while only upper case is sent to the CRT.

- Functional control keys: CNTRL-B, C, D, F, O, Q, S, X and Z.

**PRICE: \$169.95 (completion of license agreement must accompany order.)**

#### **TITLE: MICROPRODUCTS MDS**

#### **PUBLISHERS NAME: MICROPRODUCTS**

**DESCRIPTION:** MICROPRODUCTS is pleased to announce the immediate availability of their new MDS (6502 Development System). This system is available on Apple compatible Diskette and resides in slightly over 9K Ram memory. If you have not used a system in which the Editor, Assembler, Disassembler, and Debugger are all resident in memory simultaneously you do not know how rapidly and conveniently an Assembly Language program can be generated. This new Development System is also available on 5 EPROMS with on its own firmware board that will plug into any Apple slot. This board converts your Apple into a Dedicated 6502 Development Tool when desired.

THE TEXT EDITOR supports the entry and maintenance of 6502 assembly Text Files. Commands include: \* Auto line numbering, \* Link multiple Text Files with forward and backward pointers, \* Locate and Replace labels Globally, \* List file or selected line

No's, \* Text File Scrolling, \* Delete lines or range of lines, \* Execute Monitor and DOS Commands, \* Load Text File from Disk, \* Save Text File or portion of Text File to Disk, \* 40 and 80 Character print commands.

The ASSEMBLER has been designed to process all 6502 Opcodes as designated by MOS Technology as well as the following Pseudo-opcodes: \* ORG, \* OBJ, \* EQU, \* EQD, \* DFD, \* CAL, \* ENT. The CAL and ENT Pseudo-opcodes are utilized when Linking Text Files. The Assembler also contains a ROM Command that sends code Directly to the Microproduct EPROM Programmer.

The DISASSEMBLER will disassemble a specified portion of Machine Resident Code (ROM or RAM) and produce a Text File that is compatible with the Assembler writing its' own Equate Statements. A special DUMP Command is also provided that allows you to DUMP memory to the CRT, Listing both the Hex and ASCII values starting at any location.

The DEBUGGER is a powerful programming aid that will assist in developing, debugging, and testing machine language code. The Debugger executes a program step by step and displays each instruction along with the Microprocessors registers as well as values (both Hex and ASCII) contained in up to 500 user selected Memory locations. (Locations can be selected by Label as well as Hex) Two Modes are supported; TRACE and SINGLE STEP with many user specified parameters including the setting of External Break Points and the direct poking of hix values into the Microprocessor registers.

Microproducts firmly believes this Software Package to be the most versatile and easiest to use 6502 Assembly Language Development tool on the market. Mattel is utilizing the Firmware version of this System for the Development of their 6502 games.

**PRICE:**

RAM version on disk.....\$99.95

RAM version on disk

for loading into language card

(or all presently avail. 16K cards) .....\$99.95

System on 5 Eproms on Bank

Switchable Memory Module

(Runs in any slot except '0').....\$299.95

**TITLE: MONITOR EXTENDER**

**PUBLISHERS NAME: IMAGE PRODUCTS, INC.**

**DESCRIPTION:** This utility works in complete harmony with the Apple monitor to extend your computer's capability and help you use the full power of machine language programming.

Screen display shows memory in HEX, ASCII, or BINARY. Move data anywhere in memory without regard to direction or overlapping and read or write any sector on disk. Insertions may be in HEX or ASCII so you can easily format high speed text displays without conversions.

Study, modify or disassemble any program, complete with labels. Several programs may be combined, and the entire disassembled text file stored on disk/tape for later assembly. The slow listing feature steps through listings with ease.

**PRICE:**

**TITLE: MUNCH-A-BUG**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** Munch-A-Bug (MAB) is a 6502 program which assists the user in trouble-shooting 6502 assembly language programs by actually running them in a controlled manner. As the program is run, each program step is displayed, along with all 6502 registers, and optional memory points as defined by the user.

This allows you to easily see exactly what occurs at each stage during a program, and quickly find any errors in the code. MAB is a professional programming tool, published by Southwestern Data Systems, a software company specializing in utility program for the Apple II.

MAB uses only four zero page locations, and these are definable by the user, so there is never any conflict with a user's program. In addition, MAB includes its own mini-assembler, so minor patches to code can be made, right at debugging time, without having to re-run your assembler. MAB even supports the use of labels and strings!

MAB also supports such unique features as its "pass pointers". These allow the user to define a point in memory which can be flagged with a set number of "passes". At each pass the 6502 registers will be displayed. On the nth pass, MAB stops in the trace mode to further examine the routine in detail. MAB also has a "functional pass pointer", wherein a machine language subroutine can be executed at each pass, without affecting the main program (memory or registers). This is useful for performing various tests as to the status of the main program (memory or registers). This is useful for performing various tests as to the status of the main program. By setting a special return flag, MAB will "pop up" in the trace mode only under certain conditions. These features mean you can easily trace machine language routines linked to Applesoft programs.

Munch-A-Bug's commands include:

- A) Assemble 6502 "source code"
  - C) Call a subroutine
  - D) Dump memory in both hex and ASCII
  - F) Fill memory with a value
  - G) Call a subroutine with breakpoints ("Go")
  - K) Connect or delete symbol table
  - L) Disassemble 6502 code ("List")
  - M) Move memory
  - N) Trace next instruction, but don't display JSR's
  - O) "Other" screen display: TEXT, GR or HGR
  - P) Display, set, or delete pass pointers
  - Q) Quit
  - S) Substitute values into a memory range
  - T) Trace a 6502 program
  - U) "Untrace". Steps through with no display, but with option of keyboard stare/stop/end.
  - V) Convert between Hex and Decimal numbers
  - W) Freeze display window
  - X) Examine and/or modify 6502 registers
  - Y) Define, display, or modify symbols (labels)
- PRICE: \$49.95**

#### **TITLE: RELOCATING LINKING LOADER**

**PUBLISHERS NAME: MICRO LAB**

**DESCRIPTION:** You can take up to 50 machine language files that are R files generated by the Editor/Assembler in the Apple DOS tool kit and link them together into one program at an address you specify. Or you can take files from a library of Amper routines like our Language Plus series and make up a custom machine language package, linked together for quick loading. They may be accessed through Basic. Don't reinvent the wheel, combine Quick-sorts with Input, add Deallocate an array and Amper match, plus much more. Make a pack of over 30 routines designed just for you.

**PRICE: \$150.00**



**TITLE: SIMULATORS****PUBLISHERS NAME: SYBEX, INC.****DESCRIPTION:** Turn any 6502 into an 8080. Two versions are available for APPLE II.**PRICE: APPLE II cassette, Ref. S6580-APL(T), \$19.95****APPLE II diskette, Ref. S6580-APL(D), \$29.95****TITLE: THE BUG****PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** An assembly language debugging aid and learning tool for both the novice and experienced programmer. Provides the user with the capacity to control the execution of any assembly language program. Some of the included options are the ability to display or not display the instructions as they are executed, running selected sections bug free, controlling the speed of execution with the paddles, halting register breakpoints (stopping the program when specified values of either particular memory locations and/or 6502 register are found, restarting the program), resetting the breakpoints while the program is running, running subroutines within the program at full speed (by running the program at full speed when the stack pointer is pushed below a certain value), displaying the registers, and displaying memory (hex and/or ASCII). The Bug also comes with a 40+ page manual that includes examples of usage.

**PRICE: \$50.00****TITLE: TRANSLATOR****PUBLISHERS NAME: MICROPRODUCTS**

**DESCRIPTION:** This program will translate any programs developed on microproducts old 4 Character Assembler and allow them to run on the new 6 Character Assembler.

**PRICE: \$9.95 Cassette****TITLE: WOZPAK II****PUBLISHERS NAME: PUGET SOUND PROGRAM LIBRARY EXCHANGE**

**DESCRIPTION:** A collection of useful information and listings of numerous programs for the Apple II. Includes such programs as LINE NUMBER CROSS REFERENCE, SYMBOL CROSS REFERENCE, RENUMBER, APPEND, MACHINE CODE RELOCATION, TAPE VERIFY, HI-RES GRAPHICS, Etc. Explains how to modify early Apple II PC board to add blue and orange Hi-Res colors, and a "color killer" for text display. These are Steve Wozniak's original notes on the Apple II in "cleaned up" form, finally available to the public.

**PRICE: \$22.50****TITLE: XREF/65****PUBLISHERS NAME: LAZER SYSTEMS**

**DESCRIPTION:** A cross reference program for LISA 1.5 & LISA 2.0 A cross reference is vital for program development, debugging and documentation. XREF/65 lists all labels defined in a program. The line # where the label is defined, and the line # of each occurrence of the label within the program. XREF/65 is provided as part of the package +PLUS, on the same diskette.

**SORT 2.0** (source included) sorts, alphabetically and numerically, LISA 2.0 symbol tables and prints the symbol table in a 80-column format.

**SC to LISA** (Source included) converts SC Assembler II V3.2 files to LISA. Now SCASM II owners can easily upgrade to the more powerful LISA assembler.

**PRICE: \$19.95**



## COMPILERS

### **TITLE: APPLESOFT COMPILER**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** (Eiten) Will create a machine language program from your Applesoft (TM) program which will run up to ten times faster. The Compiler occupies only 3,200 bytes of memory. User oriented, the COMPILER needs only one command from its operating system to load the program into memory. Parameters for the system are set up by the menu. Features: compiles standard Applesoft (TM) programs; compiles code at user specified address; handles high resolution graphics and shape table; permits arithmetic functions; works in a single or multiple disk environment or with hard disk; requires only Applesoft and shape tables; at the end of compilation, the compiler provides a detailed analysis of the structure.

**PRICE: \$200.00**

### **TITLE: EXPEDITER II +**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** When Expediter II was released in 1981 it revolutionized the programming industry. Until that time, it had always been assumed that when performance was your primary concern from a program, assembler is required. Today that is no longer true. EXPEDITER II's goal was to deliver the ease of Applesoft programming and debugging with the performance of assembler.

Now in 1982, after one more man year of development and almost a complete rewrite, comes Expediter II +. Our primary concern was the amount of memory taken by your compiled program. Instead, we addressed the next generation of programming. We put in features to facilitate structured programming and features to ease the debugging process.

We went after some of the problems inherent in Applesoft. For instance, we are the only compiler to address garbage collection (that awful wait that stops execution while Applesoft cleans up memory). Also we don't waste valuable memory time on things such as pointers that simply aren't needed during execution.

We also designed the system so that the beginning and professional programmer alike can use it.

#### **SPECIAL FEATURES**

- Your program executes faster, up to 2 to 20 times faster than before compilation.

- Global optimization keeps the memory requirements of your "new" machine language program at a minimum.

- EXPEDITER II + is easy to use. Simply load your Applesoft program and BRUN EXPEDITER. When the compilation is complete, SAVE the program and run it to see the results. It's that easy.

- ALL DOS functions are supported in exactly the same way as in the uncompiled BASIC program- Nothing new to learn.

- EXPEDITER produces comprehensive statistics about your new program: memory requirements, data areas, constants, etc.

- A complete line by line analysis of expedited code allows individual lines or subroutines to be accessed by other routines.

- The complete symbol table lists variable names, memory addresses, string sizes as well as dimensions of arrays.

- Variables may be specified as global for common use in other expedited routines.

- EXPEDITER features a special runtime package to help keep memory requirements down. The runtime package can be generated at any user specified address.

**PRICE: \$134.95**

**TITLE: FLASH!****PUBLISHERS NAME: LAUMER RESEARCH****DESCRIPTION:**

- \* The FLASH compiler 48K Apple II or Apple II+ using DOS 3.3. To edit Integer BASIC programs, you need Integer BASIC in ROM or a language card. Compiled programs will run without Integer BASIC. Six demos included on disk.
- \* FLASH compiled programs run incredibly fast. Far faster than compiled Applesoft programs. Speed is why people buy compilers.
- \* 33 Powerful Extensions added to BASIC including: DATA, READ, DRAW, SDRAW, HOME, HPLOT, HGR, CHR\$, HCOLOR=, HBACK, HFIND, TONE, NOTE, GET, 16 BIT PEEKs and POKes, hex input/output, strings to 32767 characters and more.
- \* FLASH can print paginated Assembly Language listings so you can see the code that FLASH generates. Complete with full symbolic labeling for line numbers, forward references and user labels.
- \* FLASH can write assembly language sources files to the disk. These can be assembled with the S-C Assembler II 4.0 and the FLASH Runtime Source Code.
- \* FLASH can compile object code files to disk or to memory. No need to 'BSAVE' after compiling as with other compilers.
- \* FLASH can position a program in memory where you want it to be. Skip over hires display buffers or machine language routines easily.
- \* Full support for DOS 3.3 commands.

**PRICE: \$79 for FLASH compiler with 60 page manual****\$39 for FLASH Runtime Source Code. (Runtime Source Code requires the FLASH compiler and the S-C Assembler II 4.0)****\$55 for S-C Assembler II 4.0****\$80 for S-C Macro Assembler****TITLE: HAYDEN APPLESOFT COMPILER****PUBLISHERS NAME: HAYDEN BOOK COMPANY****HARDWARE REQUIREMENTS: Autostart ROM**

**DESCRIPTION:** Translates a standard Applesoft BASIC program into true machine code that runs three to more than twelve times faster than normally interpreted code. The longer and more complex the original program, the greater the increase in execution speed.

The Compiler is easy to use and compilation requires only one step before the user may BRUN the Compiler program.

It provides an economical solution to a long standing problem: BASIC is easy to work in, but slow to execute; machine code is quick running but difficult to write. The Compiler now allows you to write and debug programs in Applesoft BASIC, compile them and enjoy the speed inherent in executing machine language files. Sub expressions with Integer operand(s) are calculated with faster Integer arithmetic routines that result in faster execution of Applesoft intrinsics which require Integer values.

The Compiler generates sub array look up vectors for multidimensional arrays, thereby eliminating the time consuming multiplication that usually occurs during the subscript calculation. The result is increased speed for programs with many multidimensional array references. The more dimensions, the greater the increase in speed.

The starting address for a compiled module is specified prior to compilation, a call to this address executes the program. Adding two to the start address executes the program without clearing its variable space or restoring its data pointer. This allows modules to retain their data between calls (local variables).

Modules may call one another and/or may be called from a real Applesoft program running under the interpreter. All Applesoft features are supported except dynamic array dimensioning and those few statements that no longer make sense outside of an interpreter environment, such as LIST and TRACE. The advantage, in executing the source program, is that the fact of compilation is transparent to the user.

**PRICE: \$200.00**

**TITLE: PBASICS-DS**

**PUBLISHERS NAME: DECISION SYSTEMS**

**DESCRIPTION:** PBASIC-DS is a sophisticated preprocessor for structured BASIC. Now you can gain the power of PASCAL-like logic structures at a fraction of the cost. Use all regular BASIC statements plus 14 commands and 11 new statements/structures (WHILE, UNTIL, CASE, etc.). PBASIC-DS can be used to develop INTEGER or APPLESOFT programs. It is a great way to learn and use structured logic concepts.

**PRICE: \$35.00**

**TITLE: SPEED STAR**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** Speed Star is a full-function Applesoft compiler designer to quickly and easily convert your programs to fast and efficient 6502 machine language. This means a dramatic increase in the operating speed of your programs. And here's the best part- with Speed Star, it's all done automatically- no knowledge of assembly or machine language is necessary. Speed Star offers full support for DOS commands, Error Messages, Hi-Res and Lo-Res Graphics and much more, and its easy to use manual makes compiling a breeze.

Speed Star is extremely fast. Because it does not normally access the disk during compilation, it will compile approximately 1200 lines per minute! But pure speed is not the only significant advantage of Speed Star. Use it to protect your algorithms from theft or unauthorized modification.

Because Speed Star converts Applesoft programs to binary files, you can have any number of programs in memory at once, and the special "Compile to Disk" mode allows compilation of programs normally too large to be done in memory. Also contained in this truly dynamic package is a unique selective chaining option which allows you to pass just the variables you want to any or all subsequent programs. Speed Star is also the ONLY compiler that allows you to pass variables directly from an Applesoft program to a compiled program. This means you can use the compiled modules as subroutines from standard Applesoft programs.

Another important feature of Speed Star is Southwestern Data System's latest innovation- the SDS Datakey, a hardware key that plugs into your game paddle port in seconds without affecting normal paddle operation. The SDS Datakey allows the original Speed Star owner an unlimited number of backup copies while eliminating unauthorized software proliferation. With the SDS Datakey, the Speed Star diskette may be copied simply by using any standard copy program. The SDS Datakey is not required to run compiled programs.

**PRICE: \$134.95**

**TITLE: THE INTEGER BASIC COMPILER**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** I.B.C. is here to help serious programmers. Compile your Integer BASIC program to run faster than any compiled

Applesoft program and use much less memory at the same time. You no longer need assembly language for real speed and flexibility. Even novice programmers can take advantage of the advanced features of this system, such as High-Res/Color graphics, extended string handling, and hyper-speed arithmetic. Integer BASIC is superior for many applications, and the I.B.C. compiles Integer to compact high speed machine code. Just compare these bench mark results:

The I.B.C. can increase your program speed and use less memory. I.B.C. compiled programs run on Apple II and Apple II+ machines even if Integer ROM is not available.

Object code averages 25% shorter than source code.

Language card is automatically used if available.

I.B.C. spots and flags program errors.

Compiles code at 50 lines per second.

**PRICE: \$149.95**



## DISK UTILITIES

### **TITLE: 128K RAM**

#### **PUBLISHERS NAME: SATURN SYSTEMS**

**DESCRIPTION:** Our newest product. Fully compatible with Saturn's 32K RAM board, 16K RAM cards and language card. Includes 5 comprehensive software packages:

1. MOVEDOS (relocates DOS)
2. RAMEXPAND (for Applesoft, Integer)
3. PSEUDO-DISK for DOS 3.3 or 3.2
4. PSEUDO-DISK for CP/M
5. PSEUDO-DISK for PASCAL

**PRICE: \$599.00**

### **TITLE: AMPER-READER**

#### **PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** An Assembly Language program which speeds disk file access by 5-10 Times Normal Speed. Dramatically Reduces DOS Overhead for reading large files. Optional Automatic Record Blocking for large files, i.e. you can read in 10 or 20 or 100 records at a time from files containing many more records (in order to conserve memory space). Disk contains Amper-Reader and demonstration program.

**PRICE:**

### **TITLE: AMPER-READER II**

#### **PUBLISHERS NAME: ALAN G. HILL SOFTWARE**

**DESCRIPTION:** AMPER-READER II is a high speed machine language routine that can be used on an Applesoft Firmware card or Language Card System to read records from a sequential Text file and assign them to elements of a string array at BLOAD speeds. It will read a 100-sector Text file in 15 seconds. As many as 5 files may be "open for input" concurrently. A single record, blocks of records, or the entire file may be read with one statement. It features an easy-to-use BASIC interface for passing parameters such as file name, array name, disk slot and drive, number of records read or to be read, and return.

**PRICE: \$19.95**

### **TITLE: ANIX 1.0**

#### **PUBLISHERS NAME: LAZER SYSTEMS**

**DESCRIPTION:** A flexible, easy to learn and use operating system that can read and write DOS 3.3 files. Existing files and databases are not obsolete by ANIX, only complimented.

Supplied on the disk with ANIX are over 30 useful utility programs. Some of the utilities provided with the ANIX package include: ADU, DUPDSK, PUTDOS, TYPE, PRINT, STAT, DREN, FREE2, UNDEL, MAKE, SIZE, WORD COUNT (WC), LINE COUNT (LC), BUILD, ED, INIT, MAKEAUTO, BTOT, and many more.

#### **Features:**

- DOS 3.3 file structure compatible
- UNIX-like console command processor
- I/O can be redirected to a printer, slot, or disk file.
- Over 30 useful utilities and files.
- Smaller than DOS 3.3.

**PRICE: \$49.95**

### **TITLE: APPLE DISK FIXER**

#### **PUBLISHERS NAME: IMAGE PRODUCTS, INC.**

**HARDWARE REQUIREMENTS:** disk 13 or 16 sector

**DESCRIPTION:** If you care enough to back up critical programs and files, Disk Fixer will give additional peace of mind. This powerful utility for experienced Apple users is a tool kit for manipulating, repairing, and protecting all data on disk.

Use the high-speed full screen editor to examine and easily change any portion of a disk, correct space usage within files, and save money by locking out bad tracks on disks. Directories are alphabetized, if you choose.

The display and search capabilities show where specific hex or ASCII data is located and you can modify any data including binary files.

**PRICE:**

**TITLE: APPLIGUARD**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** A sophisticated system designed to enable producers of software products to protect their programs against illegal or otherwise undesirable copying. This system can create either 13 or 16 sector protected disks.

Features over a dozen state of the art program protection capabilities ranging from AUTO RUN of BASIC programs (Applesoft or Integer) to a limited protection against disk bit copiers. Most of these protection features are optional, allowing the software producer to select a custom protection system to satisfy his particular requirements.

The following protection options are standard: 1) the DOS INIT, SAVE, FP, and INT are disabled, 2) DOS 3.2.1 disks will boot with either the 13 or 16 sector disk controller, 3) and special protection provided for Language Card users. The software producer may choose from the following options: 1) disabling BSAVE command, 2) require an Autostart ROM, 3) BRUN hello program, 4) AUTO RUN Integer or Applesoft programs, 5) use of an alternate set of DOS command names, 6) flipping between the protected DOS and standard DOS, thus enabling the end user to access files on either a protected disk or a standard DOS disk, 7) and the clearing of memory if RESET key is pressed.

Beyond copy protection, Appleguard is also one of the best systems for producing copies of software products in quantity. In addition to making copies quickly (90 seconds including initialization), Appleguard will enhance DOS 3.2.1 disks to allow them to boot directly on either a 13 or 16 sector disk controller. (If DOS 3.3 disks are made they will only boot on a 16 sector disk system).

Appleguard is supplied in duplicate to help reduce the possibility that a disk failure will cause interruption of production activities.

**PRICE: \$250.00**

**TITLE: B-COPY**

**PUBLISHERS NAME: PYGMY PROGRAMMING**

**DESCRIPTION:** B-Copy is a binary file copying program for use with Apple-II disks. It works with either DOS 3.1 or 3.2 and will copy any binary file, except those which load in the top end of the available memory - (This is where the B-Copy program is running).

B-Copy will load the file, tell you the beginning and ending memory locations then re-save the file to another disk.

**PRICE: \$19.95**

**TITLE: BACK IT UP II**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** A powerful disk copy utility that enables a user to make back up copies of almost any disk that is presently available for the Apple computer.

Uses a second generation disk copying technique that is known as bit or nibble copying. This technique works equally well with both 13 and 16 sector disks including DOS 3.1, DOS 3.2, DOS 3.2.1, DOS 3.3, FORTRAN, Pascal, and virtually any other disk. The user is provided with many options, among them are quick scanning the protected disk (to find which tracks contain data), automatic half tracking, synchronized tracks, and selective track copying.

The release of this program in no way implies that Sensible Software supports software "piracy". This product is intended solely for the users that desire to back up a disk library.

**PRICE: \$60.00**

**TITLE: BINARY FILE COPY**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Permits the user to copy Binary (Machine Language) files from one disk to another. No knowledge of Machine Language is required. In addition to copying the file, the program also displays the starting address and length of the Binary file. Error handling routines make this program crash proof.

**PRICE:**

**TITLE: BYTE TRANSCRIBER I**

**PUBLISHERS NAME: MPA ENTERPRISES**

**DESCRIPTION:** Duplicates multiple formats, even some protected disks in less than one minute by working with seven tracks at a time. Duplicates are able to read and write. Will work with single or multiple disks.

**PRICE: \$40.00**

**TITLE: CATALOG SORTER**

**PUBLISHERS NAME: HOWARD SOFTWARE SERVICES**

**DESCRIPTION:** CATALOG SORTER...alphabetizes disk catalog and displays contents by file type. Also indentifies remaining space available on disk. (Written in Machine Language for high speed and full compatability).

**PRICE: \$39.00**

**TITLE: CODEX CATALOG**

**PUBLISHERS NAME: ADS**

**DESCRIPTION:** Reads, stores, and saves your disk catalogs with volume and five digit index numbers that you assign to each program entry. Program titles can be added to or deleted from this disk catalog package one at a time or by disk.

**PRICE: \$29.95**

**TITLE: CONTROL PROGRAM**

**PUBLISHERS NAME: OPTIMIZED SYSTEMS SOFTWARE**

**DESCRIPTION:** Disk-based operating system package for the Apple II (R). The complete OSS package consists of CP/A (including a set of disk utility commands similar to those of the popular 8080-based CP/M (R) together with fully compatible BASIC, Text Editor, Assembler and 6502 Debug Programs.

CP/A (Control Program Apple) is the console interface to powerful operating system which provides the user with a device independent interface to physical and/or logical I/O devices.



The I/O devices communicate with the operating system via OSS supplied and/or user written device handlers.

The OSS Disk File Manager Device Handler provides for both sequential and random data access along with file management function such as Rename, Erase, and Protect. Disk File names are of the "primary-secondary" type and may contain the wild card search characters "\*" and "?"

The OSS Basic has been designed to take advantage of the power of the OSS operating System. A typical example of this is the statement: PRINT #1, "HELLO". The "HELLO" string may be sent of the disk, a printer, a modem or any other device that has been opened as file #1. Program lines are checked for correct syntax as they are entered; while decimal floating point arithmetic, 32K character strings and long (128 character) variable names are some of the other features of OSS BASIC.

The OSS Text Editor is used primarily to develop program source for the OSS assembled; however, it may be used to edit BASIC programs or any other test. The assembler uses the MOS Technology defined 6502 mnemonics and operands. Assembler object code may be placed directly into memory, or may be sent to any available device. The debugger allows for interactive machine level debugging with command functions such as: Step, Trace, Disassemble, Memory Move, etc.

**PRICE: \$89.95 Entire package**

**\$49.94 CP/A with BASIC**

**\$49.95 CP/A with EDITOR ASSEMBLER and DEBUGGER**

#### **TITLE: COPY II PLUS**

**PUBLISHERS NAME: CENTRAL POINT SOFTWARE, INC.**

**DESCRIPTION:** Copies multiple formats- DOS 3.2, 3.3, Pascal, Fortran and most protected disks. Copies nearly any disk in less than one minute. That's faster than most standard copy programs. Written entirely in ultra fast assembly language.

**PRICE: \$39.95**

#### **TITLE: DAN'S DISK UTILITIES**

**PUBLISHERS NAME: MICRO SOFTWARE SYSTEMS**

**DESCRIPTION:** The Dan's Disk Utility Program (DDU) allows the user to directly examine and/or modify data on any track and sector of a diskette;

This program can be used to:

- \* Enter patches to machine language programs on diskette.
- \* Recover a file that was accidentally deleted.
- \* Determine correct file sizes.
- \* Examine text files to check program operation.

The use of the DDU obviously requires a working knowledge of file structures on the diskette. To assist in this, four pages of documentation are included giving some information on the Apple disk format in addition to the documentation describing the DDU program commands.

The DDU operates by bringing a 256 byte sector from the disk into memory where it can be examined, and changed if desired. It can then be written back out to the diskette, to the same sector that it came from, or if desired to any other sector on the diskette. Files may be selected by name, and the file headers examined. Data read into memory from diskette may be searched for specific values, or disassembled.

Also included with the DDU is a program called "EXPUNGE." This program is used to remove to DOS off of a diskette, freeing up approximately 10K of disk space that could not otherwise be used. This, of course, means that you will be unable to boot the system off of an Expunged diskette. The normal procedure is to use



another diskette to boot nad the Expunged diskettes for data storage.

**PRICE: \$24.95**

**TITLE: DARK - THE DISK REPAIR KIT**

**PUBLISHERS NAME: MICROSEEDS**

**DESCRIPTION:** Remember that old sinking feeling the last time one of your disks got wiped out?

Now, with DARK: The Disk Repair Kit, you'll never have that feeling again. DARK can restore blown catalogs, and repair files you thought were lost forever!

DARK really isn't magic; the procedure for rebuilding a disk is fairly straightforward, although it usually takes an experienced programmer several hours (and a lot of patience) to restore a disk.

DARK does the same job in just a few minutes. And you don't have to be a programmer to use it!

**HERE'S A LIST OF SOME OF DARK'S FEATURES:**

- \* DARK is very easy to use, and does not require you to know 'bits and bytes' and all the details of how a disk is organized.
- \* DARK's exclusive WALKTHRU screen gives a meaningful display of a file. For example, when you look at an Integer BASIC program, you see it listed as an Integer BASIC program. Likewise with Applesoft programs, machine language programs, text files, AND Hires pictures. Other 'fix it' programs can only show you meaningless hex numbers. \* DARK can format a single disk track, optionally preserving any data on that track.
- \* DARK is able to search a disk, reporting all occurrences of a specified string of characters or bytes. NOTE: This feature, as well as the single track format, aren't strictly for recovering disks, but they're so useful that we felt they should be included.

**PRICE: \$34.95**

**TITLE: DATACOPE TEXT FILE COPY**

**PUBLISHERS NAME: DATACOPE**

**DESCRIPTION:**

**WHAT IS THE DATACOPE TEXT FILE COPY?**

It is a FAST machine-language program for the Apple II series of computers that will copy one or more blocks of records from one or more disk files to a single output file at binary read and write speeds. Datacope Text File Copy uses one or more disk drives, minimizes diskette switching, and automatically repairs unreadable sectors during the copy operations.

**WHO USES THE DATACOPE TEXT FILE COPY?**

You will want to, if you have text files which must be moved from diskette for backup, repair, merging, splitting, or convenience. Users include schools, libraries, offices, magazines, laboratories, programmers, churches, hobbyists, and many others.

**WHEN IS THE DATACOPE TEXT FILE COPY USED?**

Whenever you must move a text file from one diskette to another, especially when the file is unreadable due to I/O errors. The Datacope TFC can be used to copy a file or append from two to fifteen files. Up to fifteen blocks of records may be extracted from one or more files and copied to a new file or appended to (or inserted in) an existing file. The repair feature allows files which are uncopiable due to I/O errors to be copied with a minimum of data loss.

**WHAT WILL IT DO FOR ME?**

Your text files can be copied cleanly by the Datacope TFC enabling you to spend less time dealing with imperfect back-up

copies of your important files. When a calamity happens - like a diskette getting scratched - the Datacope TFC will many times save an otherwise unreadable file. This can save you hours when compared to the alternatives: updating a previous backup file, or worse, starting a new file from scratch. And, the one copy program will work for many different copying tasks.

#### WHAT ARE THE EQUIPMENT REQUIREMENTS?

The Apple II or Apple II Plus with 32K or 48K RAM, or Apple Language System with at least one Disk II drive. More than one Disk II drive is permissible and 8" drives may be used with the Sorrento Valley Associates controller card. A version is available for the Corvus hard disk drive upon special order.

#### CAN IT BE MODIFIED INTO A TURNKEY SYSTEM?

Yes. The Datacope TFC is driven by an Applesoft program which can be modified for specific purposes. This Applesoft program passes the copy instructions to a machine-language program that uses all the available memory below DOS to copy the file. Upon completion of the copy it can execute a DOS command of your choosing and tie back into your program.

#### CAN THE DATACCOPE TFC BE USED AS A SUBROUTINE?

It cannot be used as a subroutine, it must be employed as though it were a stand-alone Applesoft program. The Applesoft driver program can be modified to integrate the copy program into a turnkey system.

#### HOW MUCH MEMORY DOES IT REQUIRE?

The machine-language copy program uses all of the memory below DOS. Your Apple may have either 32K or 48K RAM: however, large files will copy much more quickly with a 48K machine if there is only one disk drive available.

#### WHAT FILE FORMATS WILL THE DATACCOPE TFC COPY?

Any file format may be copied, including program files. However, the append, split, and repair features require that the files must be randomly accessible (i.e. opened to a fixed record length), and of the text type.

#### DO FILE FORMATS HAVE TO BE REDEFINED WITH EVERY COPY OPERATION?

No. The user has the option to save copy parameters to disk for later use with the same file format.

#### WHAT DOES THE PACKAGE INCLUDE?

All of Datacope's software is recorded on high quality 5 1/4" diskettes. Included is the diskette and a full-size comprehensive manual. The diskette has the Datacope Text File Copy program and the Datacope Disk Utility 1, a program that, in addition to other functions, saves space on a data disk by removing DOS (9.984 bytes) and by reducing the disk map (up to 2,816 bytes).

**PRICE: \$49.95**

#### **TITLE: DIRECTORY MANAGER**

#### **PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** Turn your disk catalog into a menu. Perform dozens of disk operations with just 2 keystrokes. Lock, Unlock, Load, Save, Delete, Undelete, etc. and file. Transfer files to other disks, sort or rearrange your catalog, or use flashing, inverse or lower case characters in file names.

**PRICE: \$30.00**

#### **TITLE: DIRECTORY MASTER**

#### **PUBLISHERS NAME: MICRO-SPARC, INC.**

**DESCRIPTION:** DIRECTORY MASTER is an exciting disk utility that allows you to customize your disk catalogs for a unique and professional look. With DIRECTORY MASTER you can create Custom Borders for your catalogs, create Eye-catching Titles with

Normal, Inverse, or even Flashing characters, Sort or Re-order disk files and Recover deleted files. In addition you can Lock or Unlock any range of files and even Hide files so that they cannot be seen!

DIRECTORY MASTER is the most powerful utility of its kind. And best of all, it writes all modifications DIRECTLY TO YOUR DISK (after verification, of course).

Please specify DOS 3.3 or 3.2 when ordering.

PRICE: \$29.95

**TITLE: DISC-O-DOC**

**PUBLISHERS NAME: M.D. SOFTWARE**

**DESCRIPTION:** A unique disk utility program capable of loading an entire track of information from a disk and then performing major modifications of this data. It allows the user to look into any file or program stored on a disk to see how it has been saved to disk, the format used and where it is stored. This file may then be modified in any way and re-saved.

Proper use of DISC-O-DOC will allow the programmer to undelete a program deleted in error, find hidden characters in program names, and to create catalog names which are not executable from the keyboard. It is also possible to change all DOS commands to suit the user. CATALOG can become CAT, BLOAD with a BL, VERIFY with a single key and any other combination.

Plus, a totally new concept is embodied in the routine called THE NIBBLER. With this routine the user may read in a track of nibbles on any disk regardless of format, copyable or not. Using this feature and the accompanying documentation, it will be possible to read in information on almost any disk copyable or not.

Explanation of many facets of DOS are explained in easy to understand terms. Methods of making disks uncopyable are included as well as ways to read uncopyable disks.

PRICE: \$69.95

**TITLE: DISK CERTIFIER AND COPIER**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** A valuable utility program that certifies the acceptability of blank diskettes and rejects those with flaws. It also includes a fast machine language disk copying program that will work on single and dual drive systems. And it will also format and certify the "usability" of a disk that will protect you from future loss of data.

PRICE: \$19.95

**TITLE: DISK DOCTOR**

**PUBLISHERS NAME: SENSATIONAL SOFTWARE**

**DESCRIPTION:** Read and modify Apple Disks with this easy-to-use disk track-and-sector editor, whether they were created by DOS 3.2, DOS 3.3, the Pascal system or Apple CP/M. Simple editing commands allow you to display any sector and freely edit it on screen, entering changes either as hex or character data. Special commands allow you to print a hard copy of the sector in either 40- or 80- column format. Will also test your disks, verifying every sector, whether vacant or filled with data. You can also format and verify a disk in one operation.

PRICE: \$19.95

**TITLE: DISK EMULATOR**

**PUBLISHERS NAME: LEGEND INDUSTRIES, LTD.**

PA-43



DESCRIPTION: Simulates an additional, almost instant access, Disk drive. Every byte of RAM memory on the LEGEND 64KC RAM card can be accessed with the standard DOS 3.3 disk commands, i.e.; LOAD, SAVE, OPEN, READ, WRITE, etc., in BASIC, or with the DOS RWTS subroutines in machine language.

Uses only 512 bytes of memory, and takes advantage of the organization and power built into the DOS 3.3 Disk Operating System.

A pseudo SLOT/DRIVE number is used to access the emulated drive. The user can assign any SLOT/DRIVE number to the DISK EMULATOR and the EMULATOR will not interfere with the operation of a peripheral card installed in that slot inside the Apple.

Disk Emulator is as much as 300% faster than the Apple Disk II drive because it eliminates the motor speed, step, nybble and search delays associated with the Disk II hardware.

Can utilize a single Legend 64KC RAM card to simulate 256 disk sectors (tracks 3 thru 18) in "half-disk" mode or two Legend 64KC RAM cards to simulate 512 disk sectors (tracks 3 thru 34) in "full-disk" mode.

Will support up to six Legend 64KC cards providing a total of 348K bytes (3/8ths megabyte) of online memory, all organized as three 128K byte disk drives.

Provides two new DOS commands, MOUNT and UPDATE. Mount (copy) a floppy disk into one of the emulated disks or Update a floppy disk from one of the emulated disks in approximately 16 seconds.

Supports your integer or Applesoft Firmware card installed in any slot, if you have one.

**PRICE: \$49.95**

**TITLE: DISK FIXER**

**PUBLISHERS NAME: IMAGE PRODUCTS, INC.**

DESCRIPTION: If you care enough to back up critical programs and fields, Disk Fixer will give additional peace of mind. This powerful utility for experienced Apple users is a tool kit for manipulating, repairing, and protecting all data to disk.

Use the high speed full screen editor to examine and easily change any portion of a disk, correct space usage within files, and save money by locking out bad tracks on disks. Directories are alphabetized if you choose.

The display and search capabilities show where specific HEX or ASCII data is located and you can modify any data including binary files.

**PRICE:**

**TITLE: DISK FIXER MONITOR EXTENDER**

**PUBLISHERS NAME: IMAGE PRODUCTS, INC.**

DESCRIPTION: Disk Fixer provides experienced programmers with a complete tool kit for manipulating, repairing and protecting all data on 13 and 16 sector disks. Monitor Extender works with Apple monitor and displays memory in hex, ASCII or binary.

**PRICE:**

**TITLE: DISK ORGANIZER II**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

DESCRIPTION: Using Disk Organizer II, you can order the files on a disk not only alphabetically, but in any order you want.

TITLES (actually 0 length TEXT files) can be entered in normal, inverse, flashing, and lower case letters. All work is done on a RAM version of the directory; so if you decide the changes you made are not correct, you can simply abort the process and keep the old catalog, since DO II works on a RAM version of the



directory, disk access is kept to a minimum; hence, Disk Organizer II is extremely fast. The following functions are also included: Dynamic Display of all file names in the directory before it is written to the disk, alphabetizing the file names, Undeleting deleted files, Purging deleted files, Renaming files (with the same character input options as titling), Locking and Unlocking (some or all) files, Deleting files, Deleting DOS for increased data storage, and a powerful Smart Key to automatically locate the next valid name for any specified operation.  
**PRICE: \$30.00**

**TITLE: DISK PREP**

**PUBLISHERS NAME: SYMPATHETIC SOFTWARE**

**DESCRIPTION:** Double the storage of your disks by using the back sides. Disk Prep formats and tests disks. Sectors with flaws are left so they cannot be used. The disk is left ready to boot, complete with a flaw report saved on it.

**PRICE: \$25.00**

**TITLE: DISK RECOVERY**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** This utility will help keep you out of trouble with it's Bad Block Scan option and if you do get into trouble with a messed up disk, Disk Recovery may save the day with its REDO VTOC option.

The Bad Block Scan option examines all of the sectors on a disk to verify that they are properly formatted (similar to the equivalent option in the Pascal FILER program). This option can be used even if the disk already contains files. If any bad blocks are discovered, the user will be notified which of his files are affected, and a dummy file will be generated to cover the bad blocks. With the availability of this program it would be foolish to place your valuable data on a disk that has not been scanned with Disk Recovery first.

The REDO VTOC option examines every file on the disk to detect and correct the following types of errors in the disk VTOC: 1) two files trying to use the same disk sector, 2) part of a file not protected by a "sector in use" bit in the VTOC, and 3) "sector in use" bits in the VTOC that really aren't being used by any files.

**PRICE: \$30.00**

**TITLE: DISK TEXT EDITOR EDIT-II**

**PUBLISHERS NAME: SERVICES UNIQUE, INC.**

**DESCRIPTION:** Edit-II is an improved version of the DOS Text Editor, designed to create and facilitate changes to disk files, reports, lists, EXEC files, and BASIC programs. Edit-II also supports the cassette as a file device. The Text Editor includes 35 commands. System commands allow the user to Change, Delete, Add, Insert, Print, Display, Copy, and Restore records singly or in blocks. Screen editing with character Insert and Delete. String commands allow searching, changing, and listing of single records or blocks of records for a specified word or phrase. User defined tabs and various printer options provide ease of text input. File commands merge input from various files, parts of files, and text buffers.

Edit handles full upper and lower case output to print devices and will identify lower case to the CRT utilizing inverse mode or will display actual lower case with the appropriate optional hardware adaptor.

Text may be input without regard to line overflow or pagination.

Edit-II is modular in nature; use with Disk Apple II Report Textwriter (DART) for complete text processing system.

**PRICE: Cassette \$19.95, Disk \$23.95**

**TITLE: DISK UTILITIES 3.0**

**PUBLISHERS NAME: ONGOING IDEAS**

**DESCRIPTION:** A collection of six programs...

-Copy- creates back up copies of your important program and data disks.

-Compare- verifies that a disk is a copy of another.

-Certify- verifies that all used sectors on a disk can be read.

-Free- reports the amount of used and unused space on a disk, both in number of sectors, and as a percentage of the total disk.

-Patch- a program for the advanced user, who wants to access any byte on a disk. With this program you can undelete a deleted file, protect a bad sector from access, remove or add control characters and much more.

-Dump-prints, in a Patch compatible format (ASCII and HEX), the data stored in any sector on a disk.

**PRICE: \$29.95**

**TITLE: DISK UTILITY PACK**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** The disk utility Pack includes exciting new software for disk-based APPLES, designed to make your programming life easier...

Disk Operating System (DOS)-With all the latest features

Update - Updates Existing Diskettes to current DOS and Preserves Their Contents

Applesoft CHAIN-Links Applesoft programs together

Applesoft Renumber/Merge-Renumbers and merges Applesoft routines into a single program

DOS Manual-Over 170 pages of examples and detailed user information.

Supplied with:

System Master Diskettes (Integer & Applesoft versions)

Blank Diskette

Manual

**PRICE: \$25.00**

**TITLE: DISK ZAP**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Use this program to inspect and alter blocks on your PASCAL disk to resurrect damaged directories and to restore files that have been removed.

**PRICE: \$29.95**

**TITLE: DISK-O-TAPE**

**PUBLISHERS NAME: DANN MCCREARY**

**DESCRIPTION:** DISK-O-TAPE is a utility program for the APPLE II computer. It enables you to transfer an entire disk worth of data to cassette tape and back again. Some of DISK-O-TAPE's features:

- Sector-by-sector copy of an entire DOS 3.2 or DOS 3.3 disk to magnetic tape
- Comprehensive error detection for "walk-away" confidence
- True read-after-write verification pass for reliability
- Each tape contains its own bootstrap for loading onto disk
- User-assigned naming of tapes

- Copy time is a function of the amount of data on the disk
- Pays for itself in media savings alone

Use for:

- Disk backup
- Offline storage of infrequently used disks
- A secure means of mailing a disk to a friend on a durable cassette
- Freeing up disk workspace
- Archival storage of data disks
- A cost-effective means of commercial disk software distribution (Reasonably priced licensing arrangements available)

PRICE: Cassette \$15.00, Disk \$19.95

### TITLE: DOS 3.3

PUBLISHERS NAME: APPLE COMPUTER, INC.

DESCRIPTION: DOS 3.3 is the handy housekeeper developed by Apple to help you take full advantage of your Disk II Floppy Disk Subsystem. DOS automatically keeps track of files, saves and retrieves information on a diskette, and performs a variety of other "housekeeping" chores. It dynamically allocates diskette space, maximizing diskette capacity. DOS stands for Disk Operating System; 3.3 is the version update number. When you purchase an Apple Disk II with controller, you are buying and Apple floppy disk drive and DOS 3.3.

NOTE: DOS 3.2.1. has been superseded by DOS 3.3. Programs which operate under DOS 3.2.1 cannot be read by DOS 3.3 (unless converted by "Muffin", a DOS 3.3 utility program). Conversely, DOS 3.2.1 cannot read DOS 3.3 programs.

For those Apple II/II Plus owners who wish to use, or are currently using, programs running under the previous operating system, Apple will continue to offer and support DOS 3.2.1 (Apple Product #A2D0010).

DOS 3.3...

- \* Simplifies system start up by allowing for turnkey operation under Apple BASIC...
- \* Increases disk capacity by more than 20% over previous versions of DOS...
- \* Increases a system's capability by storing and retrieving information much more accurately, quickly, and conveniently than is possible with cassette tape...
- \* Adds to system efficiency by allowing you to access data by the name under which it is filed...
- \* Saves time spent searching for files because it automatically catalogs them by name and displays the complete catalog upon command...
- \* Provides the capability to save, load, run, rename, delete, and verify files quickly and easily through its variety of housekeeping commands...
- \* Allows rapid data retrieval through both sequential and random access to the data...
- \* Allows you to make back-up copies of diskettes on a single disk drive system, rather than requiring two drives for the same purpose.

PRICE:

### TITLE: DOS 3.3 UTILITIES

PUBLISHERS NAME: ROCKY MOUNTAIN SOFTWARE

DESCRIPTION: Read, Write and Edit sector.

Disk map.

Create 132K Data Disk.

Exec File Creator.

Disk free space.

Disk to tape transfer.  
DOS command changer.  
DOS Disk volume number changer.  
Fast disk copy.  
Save binary program.  
Assembly code to data statement.  
**PRICE: \$25.00**

**TITLE: DOS BOSS**

**PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE**

**DESCRIPTION:** DOS-BOSS is a versatile utility that you will ENJOY using. Applers around the world are putting DOS BOSS to work to customize their systems and truly personalize their personal computers. For those of you who haven't heard, here's what Dos Boss lets you do:

RENAME APPLE'S DOS COMMANDS.

For example, change CATALOG to MENU or even M to save keystrokes and reduce errors. Or change SAVE to KEEP, or LOAD to RIBBIT, to protect your programs. Use your own imagination; only you will know YOUR commands.

To make a change, simply RUN DOS Boss, select the command you want changed (say CATALOG), then enter your new command word (say CAT), and that's it! Now CAT will catalog your disks! Other changes are created with equal ease. For example...

RENAME ERROR MESSAGES.

SYNTAX ERROR can be renamed CANNOT COMPUTE or TRY AGAIN!; or DISK FULL can be (BURP!); anything you want.

SAVE-PROTECT YOUR PROGRAMS.

By manipulating Dos, you can make any unauthorized attempt to save one of your programs halt and produce a NOT COPYABLE (beep!) message. Easy-to-follow instructions, a strong Dos Boss feature, are included.

DOS BOSS'S CHANGE FEATURES MAY BE APPENDED  
TO ANY OR ALL OF YOUR PROGRAMS, SO THAT  
ANYONE USING YOUR DISKS (BOOTED OR NOT) ON  
ANY APPLE WILL BE FORMATTING DOS THE WAY  
YOU DESIGNED IT!

**CUSTOMIZE YOUR CATALOGS.**

Why not replace Apple's unnecessary DISK VOLUME heading with YOUR OWN disk number, title or name? You can with Dos Boss! Include or omit the volume number as you like.

Convert long catalogs to 2 or 4 columns so that all of your file names can appear on the screen at once. Omit or alter sector numbers & language codes too if you want. You can group your programs by file-type (A, I, B, & T) when you catalog. OR catalog only the type (s) you want.

**PRICE: \$24.00**

**TITLE: DOS DATER**

**PUBLISHERS NAME: THUNDERWARE, INC.**

**DESCRIPTION:** Upgrades the regular DOS on your disks so that DOS will use the Thunderclock to time and date stamp disk files. Every time a program is saved or a file is modified, the current date and time to the minutes are stored in the Catalog with the file's name. You can tell at a glance when a program was saved or when any file was last modified. And this time/date stamping feature is completely automatic. That means any program which uses DOS will time/date stamp its files.

**PRICE: \$29.00**

**TITLE: DOS PLUS**



**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** The software solution for living with both 13 sector (DOS 3.1, DOS 3.2, DOS 3.2.1) and 16 sector (DOS 3.3) Apple disks.

Adds eight new commands to Apple DOS. Three of these are built in, and the remaining five are user definable. The built in commands allow the user to flip between DOS 3.3 and DOS 3.2 with a simple ".F" command. The user does not have to reboot, and any programs that reside in memory will not be affected by the flip. The ".S" status command is available to indicate which DOS is active.

If you have a Language Card, DOS Plus will quickly load it with the "missing" language. A ".B" BLOAD analysis command is also provided to display the starting address and length of the best binary file loaded.

DOS Plus also includes a DOS Command Changer program to allow easy customization of Apple DOS commands to suit individual tastes.

**PRICE: \$25.00**

**TITLE: DOUBLE DOS****PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Lets you switch back and forth easily between DOS 3.3 and 3.2. From Applesoft '&' will put you in the opposite DOS! Allows single drive transfer of files from 13 to 16 to 13 sectors.

**PRICE: \$18.00**

**TITLE: DOUBLEBOOT FOR LANGUAGE CARD****PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Turn your language card into a "soft" DOS switch. 13 sector boot utility is easily activated by a simple "call".

**PRICE: \$15.00**

**TITLE: FILE COMPARE****PUBLISHERS NAME: GAF SOFTWARE**

**DESCRIPTION:** A program that allows you to compare two files and report all differences. There are many times you find yourself with two copies of a program on different disks from different sources. If both are identical, you can eliminate one and save valuable disk space. But what if one is an 'improved' version that should be saved. How can you tell? Likewise,, if you modify your programs frequently, or you are in a position where you have multiple versions of a program, can you easily identify the differences? Up to now, the only way to compare two programs was by placing them side by side and checking line by line. And this was only if you had a printer! Doing this, it was easy to miss a one word or character change. And to compare two files without a printer was nearly impossible.

FILE COMPARE does one of the following:

- Displays each differing line on your screen, with one file printed normally and one file in inverse. The differing lines from one file are displayed in inverse right below the lines from the other, allowing easy comparison of changes. Only differing lines are displayed. If a line appears in one file but not the other, it will also be displayed. You get a quick idea of all differences between the files.

- If you want a hardcopy of the differences, you can display the results on your printer. With an 80 column printer, the changes will print in two 40 position columns, one for each file. The lines with differences will print side by side. Lines appearing

only in one file will only print in one column, depending on where they exist. This allows you to quickly scan down the columns, easily identifying all changes.

- If you want to save a record of all the differences, you can save the results in a text file. This allows you to keep a file of the changes to a 'base' level program. This file will contain all those lines from your updated version that are different or do not exist in your base version, plus generated DEL statements for those lines in your base level that no longer exist in your updated one. With a file of all updated versions of the program to recreate the updated version, you need simply load the base version, and EXEC the change file. All changes will be automatically applied and you will end up with your updated program. If your program is quite large, you will see quite a savings in disk space by only saving your changes!

Now you can experiment with trying out changes to a program without worrying about keeping multiple versions, only the changes. The change files can be independent of each other too! Keep a change file for each unrelated change you make to a program. Then you can start with the base program and add only some of your changes, allowing truly flexible programming. If you are maintaining separate versions of a program, this is invaluable. You can create change files for normal maintenance and error correction. Apply fixes to a program by simply executing the maintenance file. You can distribute changes in the form of update files instead of whole new versions of the program, eliminating the worry over maintaining multiple versions. And, you can edit and change your files with most text editors.

Perhaps the best reason to use FILE COMPARE is to maintain a library of well documented, yet efficient and optimized programs. Take a program that is well documented, remove all comments, make any other changes to improve efficiency, and save as your base level program. Run a FILE COMPARE on both old and new versions, and the resulting file is a list of all your remarks and other changes. Now you can do away with your old version. When you want a copy for documentation, simply load your fast base version and EXEC your remark file. Now you have your fully documented original version. Or just print the remark file (with a suitable editor) to see your documentation. Alternately, you can start with an efficient program and add comments in the same manner. Running a FILE COMPARE will produce the same documentation file. Another headache solved!

FILE COMPARE will compare any text files. A simple to use EXEC supplied with FILE COMPARE will convert your Applesoft or Integer programs to text files for your compare.

**PRICE: \$30.00**

**TITLE: FILE MAKER**

**PUBLISHERS NAME: A B BUSCAGLIA**

**DESCRIPTION:** A utility file creation and maintenance program which can create and update text files, random files, and file cabinet files on disk. This program is an excellent companion to the utility disk sort program.

**PRICE: Cassette \$9.95**

**TITLE: FILER**

**PUBLISHERS NAME: KILOWARE**

**DESCRIPTION:** A disk full of routines to aid in file handling. Three file types can be created, modified, listed, printed, transferred, or copied. File types include sequential, random files with fixed number of items per record, and random files

with variable number of items per record.

Combination routines enable splitting or consolidating files into the same or other types of files.

Multiple entry feature enables file creation when some items in a record are the same so the entry of data is mechanized.

User has access to instructions at program level.

**PRICE: \$295.00**

**TITLE: FLEX DOS**

**PUBLISHERS NAME: NORELL DATA SYSTEMS**

**DESCRIPTION:** The FLEX Disk Operating System is a versatile and flexible operating system with a simple command structure and easy-to-use features. FLEX provides the user with a powerful set of system commands to control all disk operations directly from the user's terminal. A wide variety of disk access and file management routines are available for the programmer's use.

The EXCEL-9 Card is provided with the FLEX Disk Operating System and related utilities (27 different commands), a 6809 Macro Assembler, and a Text Editor. There are many application programs available that run under the FLEX DOS and these are described below.

The FLEX Disk Operating System is composed of three (3) distinct parts: the File Management System (FMS), the Disk Operating System (DOS), and the Utility Command Set (USC). A powerful capability of FLEX is that the system can be expanded by adding new utility commands. Another important feature of FLEX is its dynamic file space allocation capability. Included with this is the automatic "removal" of defective sectors from a diskette, automatic space compression and expansion on all text files, user environment control specification and uniform diskette wear due to an intelligent space allocator.

The Utility Programs provided with the FLEX DOS reside on the system diskette and are loaded into memory when required by the user. The utilities provided perform the saving, loading, copying, renaming, deleting, appending and listing of disk files. Other utility commands allow you to examine the contents of a diskette directory and to set the environment control commands.

**PRICE:**

**TITLE: GAF UTILITY PACKAGE 1**

**PUBLISHERS NAME: GAF SOFTWARE**

**DESCRIPTION:**

-File Compare- A program that allows comparing of two programs and reporting all differences to your screen, printer, or a disk file.

-Menu- A general purpose menu program that automatically reads the disk catalog and displays it on your screen, along with a letter code for each program. Pressing the appropriate letter will run the corresponding program. Menu will dynamically handle a catalog of any size, and will optionally put a title on top of the screen. No more need to change your menu program every time you add or delete a program from a disk. So simple that anyone can now run programs with one keystroke action. Included are Integer and Applesoft versions.

-Applesoft and Integer Sorts- Includes a fast implementation of the Shell/Metzner sort. An Applesoft version sorts string, integer, or floating point arrays. An Integer version sorts in memory strings. A fast machine language version for Integer BASIC sorts almost instantaneously. Easy to adapt to your sorting needs.

-Convert to Text- An easy to use EXEC that turns any Integer or Applesoft program into a TEXT file. The TEXT file can then be



used by File Compare, edited and changed with an editor, or converted from Integer to Applesoft and vice versa.

**PRICE: \$30.00**

**with GAF Utility Package II \$50.00**

**TITLE: GAF UTILITY PACKAGE 2**

**PUBLISHERS NAME: GAF SOFTWARE**

**DESCRIPTION:** Contains:

-Multiple Disk Catalog- Tired of endlessly searching through your disk for your favorite game or utility? Do you keep a notebook of all your individual disk catalogs that you must leaf through and update constantly? Now combine all your catalog off each disk and either assign the natural volume number, or let you assign your own volume number. The TEXT file that results can be printed directly, or loaded as a database in Apple's File Cabinet database program (not included but found in the Apple Software Bank volume #3). With File Cabinet, you can sort and print the list with various report formats (included). Now you can list all your programs by volume, program name, size, or type. Included are Integer and Applesoft versions.

-File Cabinet Fast Sort- This sort, when added to FILE files will sort in a fraction of their former time. Also avoids Applesoft garbage collection. All changes come in an EXEC which can be easily executed to update your File Cabinet.

-File Copy- A single disk file copy program that will allow you to move Integer, Applesoft, Binary, and Text files from one disk volume to another. Move single or multiple files at one time. An invaluable aid. Included are Integer and Applesoft versions.

-Food Plan- Generates a daily food plan for you, complete with calorie counts. Chooses a balanced selection for breakfast, lunch, and dinner. Included are Integer and Applesoft versions.

**PRICE: \$30.00**

**with GAF Utility Package 1 \$50.00**

**TITLE: HIGH SPEED INIT**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Allows users operating under DOS 3.2 or 3.2.1 to cut disk initialization speed in half. May be used with any memory size. The user runs this program and then inits a disk in the usual way. The high speed init also improves disk access speed, saving time and prolonging disk life.

**PRICE:**

**TITLE: INTRODUCING COPY II PLUS (VERSION II)**

**PUBLISHERS NAME: CENTRAL POINT SOFTWARE, INC.**

**DESCRIPTION:** Version II has added increased reliability, features, and speed. Currently available copy programs rely on the user to be familiar with the disk operating system and the particular protection scheme used. Copy II Plus does everything it can to deduce this information, making it as easy to use as possible. In fact, it mimics the display of the copy programs supplied on your master disks from Apple Computer Inc.

Some of the features of Copy II Plus Version II:

Fast- Typically duplicates disks in 45 secs., even less if multiple controller cards are used.

Versatile- Determines the DOS version for you.

Partial copies- Allows selected tracks to be copied.

Reliable- Duplicates made by Copy II Plus can be written to as well as read from (Timing is standard).

Half Tracks- If Copy II Plus finds that half tracks are used, it will copy them- automatically.



Flexible- Reads and writes five tracks at a time to simplify single drive operation, and allows using any slot/drive combination.

PRICE:

**TITLE: LOCK-IT-UP 4.1**

**PUBLISHERS NAME: DOUBLE-GOLD SOFTWARE**

**DESCRIPTION:** If you are serious about selling software for the Apple II, piracy is the leading problem which you will face. According to an article which appeared in SOFTLINE magazine, January 1982, page 21, software piracy increases the distribution of programs by as much as five or six times. This process is facilitated by many of the "nibble" copy programs now available which claim to copy almost all software.

Double-Gold is now introducing a solution to this problem, Lock-It-Up 4.1. This program will take a standard DOS 3.3 diskette, copy-protect it, and then allow rapid duplication of the product. Not only does our software protect against all standard copy programs, it also protects against all "nibble" copy programs currently available, including: Locksmith 4.1, Back-It-Up, Clone, Omni Copy, Nibbles Away, and Copy II+, among others. Our system incorporates over thirty state-of-the-art copy-protection features making it highly unlikely for "nibble" copiers to be able to copy these diskettes in the near future. Our product also includes an optional "semi-hardware" modification, making it unlikely for anyone to successfully copy the protected program even in the future.

PRICE: \$195.00

**TITLE: MASTER CATALOG V2.0**

**PUBLISHERS NAME: ALAN G. HILL SOFTWARE**

**DESCRIPTION:** A powerful utility used with Applesoft Firmware or Language Card systems to organize your software library by cataloging the programs on your disks into one or more Master Catalog text files. Almost 1200 programs may be added to each master catalog, sorted, searched, and listed. High speed machine language routines are used to read your disks catalog; create a master catalog, sort by program name, volume number, user assigned secondary volume number, or program type; search for programs, volumes, or types; and read the master catalog file(s). Features:

Ultra fast AMPER SORT machine language sort routine

Machine language Catalog read routine

Machine language Text file read routine

PRICE: \$29.95

**TITLE: MASTERDISK**

**PUBLISHERS NAME: MASTERWORKS SOFTWARE, INC.**

**HARDWARE REQUIREMENTS: 1-4 Drives, Line Printer**

**DESCRIPTION:** MASTERDISK is a very powerful disk utility. It has been written in a manner that makes it friendly to the user, and requires little background knowledge of DOS. It comes with a thorough user manual that goes into a brief discussion of DOS as well as the operation of the programs and a number of hints on how to apply the program to specific needs. The capabilities included in MASTERDISK are:

A powerful, user oriented disk sector editor that does a number of things that allow the user to understand, and change the contents of any disk.

\* EXAMINE- allows any sector to be displayed for the user.

\* DECODE- allows the user to display decoded contents of VTOC,

Directory, Track/Sector Table, Binary File, Basic File or Text File sectors.

\* EDIT- allows any byte of a sector to be directly edited.

\* WRITE- writes sector to any location on a disk. An edited sector may be returned to it's original location or may be moved to another location on the disk.

A fast, single drive copy program that copies only those sectors that are actually in use to reduce copying time.

A VTOC/Directory maintenance program that simplifies the task of recovering from DOS indexed file length errors.

\* UNDELETE- scans the directory of a disk and displays all deleted files found. Allows the user to undelete a file by picking one or more numbers on the disk.

\* RECONSTRUCT- all files on the disk are examined and their actual sector usage is used to recreate the disk.

\* VTOC- eliminates any errors introduced in file lengths by DOS.

Any screen print capability that can be used to print any screen display in MASTERDISK by pressing (CTRL Y).

PRICE: \$29.95

**TITLE: MASTERDOS-DOS CUSTOMIZING DISK**

**PUBLISHERS NAME: MASTERWORKS SOFTWARE, INC.**

DESCRIPTION: A user oriented utility that allows the customization of various aspects of the Disk Operating System (DOS). Through this disk the user may change any or all of the DOS commands, error messages, boot program name, and disk catalog title. In addition the storage capacity of "data" disks may be increased by as much as 12% by eliminating the unnecessary DOS image and reducing the number of sectors allocated to the file directory.

It will make DOS speak your language. In addition to the convenience of being able to get a catalog listing by typing "CAT", "DIR", or anything else you want, the command change feature will produce disk security since only those who know what the new commands are will be able to list the catalog or even "RUN" the programs. The boot name change feature not only allows the user to specify any desired file name for boot time execution, but also allows that file to be a binary file or "EXEC" file in addition to a basic program. The disk catalog title change will allow the user to identify each disk with a personal identification that will be displayed every time a catalog is run.

PRICE: \$29.95

**TITLE: MCAT**

**PUBLISHERS NAME: HIGHLANDS COMPUTER SERVICES**

DESCRIPTION: MCAT 2.0 is a fast binary utility which creates a sorted master catalog which is saved on disk as a binary file (Fast). The master catalog can be easily updated a whole diskette at a time (Add, Delete, Replace), List/Print have global search capability and one or two columns. Provisions for duplicate volume numbers. Approximately 1200 file names.

PRICE: \$19.95, CREA on Disk With 16 Page Manual

\$14.95, MCAT on Disk With 10 Page Manual

\$29.95, CREA And MCAT On One Disk With Manuals

\$ 2.00, One Manual; \$3.00 Both Manuals

**TITLE: MEMORY MASTER 1.1**

**PUBLISHERS NAME: LEGEND INDUSTRIES, LTD.**

DESCRIPTION:

- Relocates the DOS 3.3 Disk Operating System to reside in the

\$D000 to \$F7FF address space in one of the 16K banks of RAM on the LEGEND 64KC card or the entire 16K of RAM on a 16K RAM card like the Apple Language card. The relocated Disk Operating System provides the user with a full 44K bytes of programmable RAM memory within the 48K on the Apple mother board for more variable storage space and longer BASIC program.

- Your Integer or Applesoft Firmware card is not obsolete. Memory Master will manage a Firmware card installed in any slot.

- The DOS "CATALOG" command displays the number of unused or free sectors remaining on each disk as you catalog it.

- The new FLIP (.F) command allows the user to "flip" between 16 sector (DOS 3.3) and 13 sector (DOS 3.2) without re-booting, and best of all, any programs residing in memory are unaffected by the "flip".

- The new SHOWDOS (.S) command promptly displays the current DOS version in use.

- The new BSTAT (.B) command displays the hexadecimal starting address and length of the last Binary file either BLOADED or BRUN, a valuable feature for BSAVE Binary files.

- The new MONITOR (.M) command places the user into the Apple monitor quickly.

- Machine Language programs can access the DOS RWTS routines through the standard DOS page 3 vectors (\$3D0 thru \$3EC) and no additional page 3 space is used by MEMORY MASTER.

**PRICE: \$34.95**

#### **TITLE: MENU ASSORTMENT**

**PUBLISHERS NAME: WALLACE MICRO MART**

**DESCRIPTION:** Menu Assortment is a group of programs that allow you to run any disk program by a simple touch of a key. The programs include a short menu, a numeric menu and an alpha menu. The programs are easy to use and only requires one step to add a new program to the disk menu.

**PRICE: \$6.95**

#### **TITLE: MENU GENERATOR (DISK ORGANIZING SYSTEM)**

**PUBLISHERS NAME: CRANE SOFTWARE, INC.**

**DESCRIPTION:**

##### **MENU GENERATOR:**

- Automatically writes computer menu programs in BASIC
- Easy to use, requires no programming
- Complete menu definition by filling out one screen form
- Develops menu programs to
  - Categorize and organize program disks
  - Run programs on any disk by single numerical input
  - Eliminate direct interface with computer operating system
  - Easily access programs of similar type
  - Customize computer operation with professional displays

##### **MENU PROGRAM FEATURES:**

- Formatted and centered display
- Entry of option number produces one of the following operations:
  - Run BASIC programs
  - Run machine language programs
  - Boot disks to run protected programs
  - Run user entered programs
  - End menu program
- Operations for any slot or drive
- Error processing routines
- Display up to nine elements per menu
- Run multiple menus



- Protected field data entry
- Documented code for each menu program

#### **MENU GENERATOR FEATURES:**

- Complete menu definition and data entry on one screen form
- Add, edit, delete and sort menu elements
- Menu display automatically formatted and centered
- Examine menu screen and operations before menu program is written
- Automatic generation of menu program to any slot and drive
- Storage of menu input parameters in a data base
- Add, edit and delete menus with default options
- Data base storage for up to 150 menus
- Formatted printout of menu parameter data base

**PRICE: \$39.95**

#### **TITLE: MULTI-DISK CATALOG**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** Multi-Disk Catalog is designed specifically for keeping track of the contents of the APPLE diskette library. The resulting master catalog can be sorted, searched, and printed. Multi-Disk Catalog is entirely menu drive, easy to use, and very fast. Some of the unique features included are:

- \* Works with 13 and 16-sector formatted diskettes (DOS 3.1, 3.2, and 3.3). Diskettes from either type DOS can be added to the same data-base used.
- \* You assign the volume identification number (range 1 to 999); there is no need to INIT each of your disks with a unique volume number.
- \* A 2 letter classification code can be added to each file name. The classifications are retained when the disk volume is updated.
- \* Multi-key sorting. Up to 3 keys may be selected for sorting the file names. The sort keys include disk number, file name, classification, file type, and file size.
- \* Multi-Disk Catalog is written entirely in machine language, so it is very fast.
- \* A powerful search mask can be used to find a file name or groups of file names.
- \* Multi-Disk Catalog supports special printer interfaces.
- \* Both sides of a diskette may be entered under the same disk number.
- \* Titles may be entered for each diskette and much more!

**PRICE: \$25.00**

#### **TITLE: MULTIBOOT UPGRADE**

**PUBLISHERS NAME: WESTERN MICRODATA ENTERPRISES**

**DESCRIPTION:** Lets you take a 3.2 disk and upgrade it so that it can be booted on a 3.3 (or 3.2) machine while maintaining a 3.2 environment. This means your 3.2 programs never need to be modified for 3.3 machine use.

**PRICE: \$50.00**

#### **TITLE: NIBBLES AWAY II**

**PUBLISHERS NAME: SHERMAN ELECTRONICS**

**DESCRIPTION:**

**AUTO-LOAD PARAMETERS** - Free's the user from having to manually key in Param values used with the more popular software available for Apple. A screen display of the Auto-Load parameters actually loading, permits the user to study the changes being made.



**PARAMETER CONVERSION** - Parameters published for similar backup systems may be used with Nibbles Away II.

**EXPANDED USER MANUAL** - New Tutorials for all levels of expertise, Beginners Flowchart for "Where Do I Begin" to "Advanced Disk Analysis".

**TRACK BIT/SECT EDIT** - All new Track Bit/Sector Editor includes the following features: READ WRITE, INSERT, DELETE, SEARCH, SECTOR EDITING and impressive PRINT CAPABILITIES.

**DISK DIAGNOSTICS** - Checks such things as: Drive Speed, Disk Media Reliability, and Erasing Disks.

**PROGRAM MODIFICATION** - All new way to deal with Parameter changes; NA-II displays them On Screen, and in a text format that is as easy to use as pressing one key to move through the listing!

**UPDATES FOR REGISTERED OWNERS** - If you are the owner of an earlier version of Nibbles Away from Sherman Electronics you may update for a \$10.00 fee to cover p & h, New Manual, and New Program Disk. Please send the Registered SERIAL NUMBER, NAME, and ADDRESS of your ORIGINAL order along with a check or money order for fastest service.

**PRICE: \$69.95**

#### **TITLE: ONGOING IDEAS DISK UTILITIES 2.1**

##### **PUBLISHERS NAME: ONGOING IDEAS**

**DESCRIPTION:** The DISK UTILITIES disk consists of five programs all designed to work width one disk drive.

A. COPY - a program to copy disks

B. PATCH - a program to display or modify any sector on a disk

C. DISK STATISTICS - a program to display the amount of unused disk space

D. COMPARE - a program to compare disks

E. CERTIFY - a program to verify that all sectors flagged as written on can be read.

**PRICE: \$19.95**

#### **TITLE: ORIGINAL QUICKLOADERS**

##### **PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** Unique disks that let you load DOS, the Language Card, and an application program of your choice extremely fast (under 10 seconds for the Language Card, DOS, and a very large application program). Quickloaders boot as either 13 or 16 sector disks and are easy to set up and use. To change the DOS, Language Card contents, or application program that will be Quickloaded, merely load your Apple RAM with the new data and use the reconfigure option. The next time you boot the Quickloader disk, it will quickly load this new setup into your Apple. Quickloader disks may be reconfigured any time the need arises. Some examples of the various uses of Quickloader includes: 1) a boot disk that loads DOS 3.2, loads Applesoft into the Language Card (without the "basics" disk), and loads and executes the CALL-A.P.P.L.E. Program Line Editor, 2) a boot disk that loads MUSE DOSE (a convenient way to back up the DOS on your SUPER-TEXT disk), 3) a boot disk that loads DOS 3.3, loads Applesoft into the Language Card, and loads the Applesoft Programmers Aid from Apple or 4) a boot disk quickly loads DOS and loads and executes the LISA assembler (from Lazer Systems).

**PRICE: \$25.00**

**TITLE: OS/A+**

**PUBLISHERS NAME: OPTIMIZED SYSTEMS SOFTWARE**

**DESCRIPTION:** A DOS with a documented assembly language interface. Upward compatible with the file systems of Apple's DOS 3.2 and 3.3 but with flexibility not available until now. Add your own commands. Add your own device drivers. Easy fast random access from assembly language or BASIC A+.

**PRICE: \$80.00**

**TITLE: PIG-DOS**

**PUBLISHERS NAME: THE BIG PIG SOFTWARE COMPANY**

**DESCRIPTION:** A DOS ENHANCEMENT PACKAGE

\* modifies your present system to give you up to 3 times faster disk access!

\* instant free sector count every time you catalog.

\* executive any type file upon boot-up: Basic, Binary, or Exec.

\* catalog security: hide secret files.

\* compatible with all normal (unprotected) DOS 3.3 disks.

PIG-DOS is an inexpensive, time-saving enhancement package for Apple DOS 3.3. It is an easy-to-use modification utility which gives incredibly fast disk access.

PIG-DOS is NOT a one-shot "quickloader" (which would only work for one file at a time), but rather an "always-ready-in-memory" fast-operating system! Compatible with all normal (unprotected) DOS 3.3 disks, PIG DOS loads your files, programs, and graphics screens up to 3 TIMES FASTER, making your computer time much more productive!

PIG-DOS HAS OTHER FEATURES, TOO! You can specify whether you want a particular disk to execute a binary file, basic program, or exec file upon boot-up. It is possible to hide files from the disk's catalog, keeping desired files confidential. When you catalog with PIG-DOS, you are also provided with the number of free sectors remaining on the disk. All this adds up the the best DOS enhancement package around- PIG-DOS!

**PRICE:**

**TITLE: PSEUDODISK: A DISK SIMULATOR FOR INTEGER BASIC**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** Have several programs in memory at once, and change from one to another in a fraction of a second.

To enter PseudoDisk commands you simply type them in and hit RETURN. The commands enable you to save a program into memory, retrieve a program to RUN or LIST, see a list of programs in memory, or delete a program. There are also functions that will save a collection of programs on tape, load a file, or store variables on tape.

With the conveniences of PseudoDisk: A Disk Simulator for Integer BASIC, you have a program that performs many of the functions of a disk, but without the high cost.

**PRICE: \$24.95**

**TITLE: SINGLE DISK COPY**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** An extremely good utility program for the Apple II. Allows owners of only one disk to back up insert work. Copy is very fast, does verification, and requires a maximum of 3 passes on 48K system (5 passes on 32K).

**PRICE:**

**TITLE: THE DI SECTOR DISK****PUBLISHERS NAME: MIKE ROWE PRODUCTIONS**

**DESCRIPTION:** A collection of disk utility programs to help get more from your Apple. The Di Sector includes the following programs:

-The Disk Editor- a powerful editor that allows you to display and edit any sector on your Apple diskettes.

-The Directory- lists all sectors used by each file on a diskette.

-The VTOC Creator- allows painless creation of the Volume Table of Contents on a diskette. This allows you to create special data disks or to repair some damaged diskettes.

-The VTOC Printer- prints the Volume Table of Contents to the screen showing which sectors are freed and which are used.

-The Exec File Creator- makes creating short EXEC files simple and fast.

-The Text File Printer- dumps sequential text files to the screen or a printer.

-The Old Rom Loader- allows Language Card owners to load the code for the old monitor rom into the language card.

Requires Applesoft in rom or the language card.

**PRICE: \$20.00**

**TITLE: THE MANIPULATOR****PUBLISHERS NAME: PEAR SOFTWARE**

**DESCRIPTION:** Access any textile for reading or writing within 15 seconds! Single keystroke control of: Listing Speed, Monioc, No Monioc, Display, Pause, Data Input, and more! Easy to read screen format.

Use read/write as an "exec" ed working tool within a program or as a system of its own. Line print files in document or raw data form. Reads - Writes - Sorts - Prints - Data material

**PRICE: \$34.95**

**TITLE: THE UTILITIES DISK****PUBLISHERS NAME: CALIFORNIA SCHOOL FOR THE DEAF****DESCRIPTION:**

Contains:

DISK COPY - can copy with single drive or I/O errors

IMPROVED CATALOG - which makes CTRL characters visible

DISK MAP - to identify disks with bad sectors

UPDATE 16 - to convert disks from 13 to 16 sector format

CATAGAIN - to easily check catalogs of several disks

LESSON MOVER - which saves Lessons to additional disks

BLISTER - requires Apple Silentye Printer to make paper copies of Blocks lessons. (Copyright, Margaret G. Irwin)

SCRUNCH - reduces graphics to one-quarter size

TV TEST PATTERNS - to help you tune your television sets

**PRICE:**

**TITLE: TRACK & SECTOR LIST****PUBLISHERS NAME: SOFTAGON, INC.**

**DESCRIPTION:** Now available with 3.3 DOS update!! TRACK & SECTOR LIST by Craig Robertson sold internationally in 22 countries.

Program won't load? Trouble booting the disk? CATALOG returning I/O ERROR? TRACK & SECTOR LIST can be the answer. With TRACK & SECTOR LIST you can read and change any data bit on your disk, giving you direct control over undamaged disks.

TRACK & SECTOR LIST is an interactive assembly language program which enables the disk to be directly accessed. Because the data

on entire sector is displayed on one screen page, it is possible to identify an I/O ERROR and recover from it, change the name of a program, find "hidden" control characters, undelete an accidentally deleted program and much more.

EASY TO USE: "Operating the program is so effortless and well thought out that it is very easy to remember how to use even without instructions."

TRACK & SECTOR LIST is extremely easy to use. For example, to examine a sector, simply specify the Track number and Sector number, then hit the "R" key and that sector will appear on the screen. To examine the next sector, hit the "+" key; hitting the "-" key moves you back, there is rarely a need to hit (RETURN) after a command. You don't even have to press the shift key to get a "+".

32 PAGE TUTORIAL MANUAL: TRACK & SECTOR LIST comes with an attractive 32 page tutorial manual, instructing the user in the basic concepts of disk operation, file organization and use of the program. Further, the manual progresses to detail directory format, the VTOC, track bit maps etc., and describes four of the many applications for TRACK & SECTOR LIST. Appendices include the ASCII character code, a summary of commands, and more.

**PRICE: \$29.95**

**TITLE: UNIVERSAL BOOT INITIALIZER 4.0 (UBI 4.0)**

**PUBLISHERS NAME: S & H SOFTWARE**

**DESCRIPTION:** UBI 4.0 creates either:

1. A DOS 3.2.1 disk that boots directly on 13- or 16- sector PROMS, "Quick-Loads" a RAM card (in 1.7 seconds!) with the "missing" BASIC language and executes a BASIC, Binary or EXEC greeting program in Drive 1 or 2, or...

2. A copyable DOS 3.3 disk that boots directly on 16- sector PROMS and functions similarly. In addition, DOS 3.3 UBI 4.0-created disks include the DOS "FREE" command and The DOS Enhancer--which Quick-Loads or Quick-Runs Binary, Applesoft and Integer BASIC programs.

**PRICE: \$69.95**



## LANGUAGES

### **TITLE: ADVANCED PASCAL**

**PUBLISHERS NAME: LITTLE GENIUS, LTD.**

**DESCRIPTION:** Ideal for the person who has mastered the fundamental principles of programming in Pascal and now wants to extend his knowledge and expertise to take full advantage of the facilities of the language and the machine.

By the end of the course you will be able to make full use of the language with a sound understanding of types of variables and arrays, procedures and functions, CASE, WHILE, and REPEAT as well as being introduced to TURTLEGRAPHICS and SETS.

After a brief review of the prior knowledge required and a lesson on how to use the course, we begin with types of variables not previously covered including constants and user defined types.

RECORD is fully described including types of several variables and accessing fields, followed by the use of WITH and coverage of BOOLEANS.

There is a detailed section on Procedures and Functions. This includes splitting tasks into different parts for different jobs, local variables and declaring a procedure. Parameters and their use are described in detail.

A comprehensive section on alternatives and repetition includes detailed coverage of CASE and full descriptions of WHILE and REPEAT with illustrative examples showing the principles to be applied when constructing loops.

There is a full introduction to TURTLEGRAPHICS including descriptions of the Apple screen, using color and graphic commands.

A SET is defined and the creation and use of sets in Pascal is explained and this is followed by a section on recursion.

Finally the course gives practical advice on using pointers and concludes with a lesson on program design and a review of a case study.

**PRICE:**

### **TITLE: APPLE FORTH 1.7**

**PUBLISHERS NAME: CAPTAIN SOFTWARE**

**DESCRIPTION:** The Forth System is an interactive and structured - programming language. With this Forth Interest Group (FIG) compatible nucleus, the Apple - user can define his/her own operations and enter them as working components of the language. This allows the user to build a working library of unique functions, including the creation of new data types. Machine language programs, though rarely necessary, can be entered from the keyboard and are automatically-linked, ready to run immediately.

Apple Forth 1.7 includes self-documenting features: a screen-editor; a decompiler; and a utility package for software development.

It has its own built-in operating system. Forth is fast (commonly 10 times as fast as integer Basic), and produces extremely compact object code.

Hardware recommended: 48K Apple or Apple Plus with one disk drive. Cap'n Software fully guarantees each Forth system sold. User hotline available. Full 100% credit update policy. Fully documented, with user-notes included in the price of the system (issued from Time-To-Time).

**PRICE: \$140.00**

### **TITLE: APPLE FORTRAN**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

PA-61

DESCRIPTION: FORTRAN is a powerful programming language, especially suitable for work in mathematics, engineering and sciences. Apple FORTRAN, usable with the Apple Language System, is the ANSI Standard Subset of the recently-defined FORTRAN 77 standard; in several areas, Apple FORTRAN contains enhanced features and capabilities.

Apple is providing Fortran for use by technical professionals and educators who are both familiar with the FORTRAN language and are using packages written in FORTRAN programs are already in existence, particularly for engineering and scientific applications. Apple FORTRAN provides the sophisticated FORTRAN programs on an Apple. Apple does not recommend FORTRAN for the individual new to programming.

Apple FORTRAN...offers enhanced features and capabilities because it supports the newest computer industry standard, ANSI X3.9 - 1978...provides a comprehensive software design environment including an editor, linker, file handler, assembler, Apple Pascal compiler, and system library, operating in the Apple Language System...eliminates the need to recompile or reassemble existing code files when assembled machine code can be combined with a FORTRAN P-Code file through the Apple Language System's linker facilities...allows you to take full advantage of Apple's Hires graphics capabilities by interfacing to graphics routines in the system library...gives programmers access to large libraries of material, since FORTRAN is a familiar, well-established language...provides access to special Apple features, such as sound generation and control paddles, through its system library routines...permits you to combine several source files in a single compilation through compiler directives in the source code.

First , Some Words About FORTRAN '77.

FORTRAN 77 contains significant additions and enhancements to the previous 1966 standard. For example, mixed-mode arithmetic expressions are allowed. Structured programming is supported through expanded IF statement constructs. Logical IF, Block IF, Else, and End IF statements provide a vastly improved method of clearly and accurately specifying the flow of program control. CHARACTER data type replaced Hollerith; alphanumeric data can be represented as strings rather than array elements.

Some Specifics About Apple FORTRAN.

Apple Fortran is the ANSI Standard Subset FORTRAN 77. It also supports enhancements and facilities from the full FORTRAN 77 language. In particular; Subscript expressions may include array elements and function calls.

DO statement limits may be defined by expressions, rather than just single variables.

I/O units may be specified by expressions, rather than just constants or simple variables.

The I/O list of a WRITE statement may include expressions.

All combinations for FORMATTED/UNFORMATTED and SEQUENTIAL/DIRECT files are allowed, with the following restrictions:

- BACKSPACE is supported only for files connected to the blocked devices; it is not supported for UNFORMATTED SEQUENTIAL files:

- DIRECT files must be connected to block devices.

Apple FORTRAN contains a number of enhancements beyond the full FORTRAN 77 specifications. In particular:

Compiler directives may be included in the source code. For instance, the \$INCLUDE directive allows you to insert previously-developed code into your program without having to repeat the code. This is useful, for example, when you are writing many subroutines which use the same COMMON block. You can write the COMMON block just once, and \$INCLUDE it in every subroutine.

An additional parameter to the OPEN statement allows you to specify whether the file is blocked or unblocked.

There are two minor differences between the ANSI Standard Subset FORTRAN 77 and Apple FORTRAN. They are:

Subprogram names cannot be passed as parameters.

INTEGER and REAL data types have different storage requirements - two bytes for INTEGER, four bytes for REAL.

To use Apple FORTRAN, you will need:

Apple II or Apple II Plus, each with the Apple Language Systems;

Apple Disk II drive with controller\*;

Video monitor or television.

\*While a single drive system is adequate for very small programs, two drives are strongly recommended for ease of operation and more serious program development.

Apple FORTRAN is written in Pascal and produces P-code which runs in the Apple Pascal Operating System.

Diskettes: 16 Sector Format

The standard library of intrinsic functions supplied with Apple FORTRAN include:

INT, AINI, MOD, DIM, MINO, EXP, TAN, SINH, LLE, IFIX, ANINT, AMOD, MAXO, AMINO, ALOG, ASIN, COSH, LLT, REAL, NINT, ISIGN, AMAXO, MINI, ALOGIO, ACOS, TANH, CHAR, FLOAT, IABS, SIGN, MAXI, AMINI, SIN, ATAN, LEG, EOF, ICHAR, ABS, IDIM, AMIXI, SQRT, COS, ATAN2, LGT.

With your Apple FORTRAN order, you will receive:

One (1) each copy of the two FORTRAN system diskettes;

Apple FORTRAN Language Reference Manual.

PRICE:

#### **TITLE: APPLE PILOT**

**PUBLISHERS NAME: COOK COMPUTER COMPANY**

**DESCRIPTION:** This is a version of the computer assisted instruction author language, PILOT. APPLE PILOT may be used to write teaching materials for students of any age. All core instructions have been implemented as well as special graphics and sound commands. The instructions are easily learned by children as young as 8 years old. A manual is provided along with three sample lessons in PILOT.

**PRICE: \$25.00**

#### **TITLE: BABBLE**

**PUBLISHERS NAME: THE SOFTWARE FACTORY**

**DESCRIPTION: WHAT IS BABBLE?**

In some ways BABBLE is a programming language like BASIC or PASCAL but, unlike these general purpose languages, BABBLE is highly specialized. "Programming" in BABBLE is much simpler than in BASIC, as you define the rules the computer will follow to create random of fixed patterns using language, music, or graphics. A BABBLE program can be as simple as a random sentence "babbler" or as complex as a meaningful prose generator. The only limitation is your imagination. Some of the things BABBLE can do are:

Complete a partially written story, "filling in the blanks" with words, either chosen at random from lists you specify, or obtained from the keyboard at execution time. The stories generated this way are often hilarious!

Construct random poetry and jingles from "building block" words and phrases. Laid out in grammatical rules.

Generate random stories from small sections or sentence patterns. Create fixed or random graphic displays, block letters, and animation more concisely and easily than in BASIC.

Mix text, graphics, sound (and anything else you can think of through calls to your own assembly language subroutines).

WITH BABBLE YOU GET ...



A general purpose full screen EDITOR supporting both tape and DOS test files.

A COMPILER which translates your BABBLE code into high-speed interpretive code.

An EXECUTOR which interprets and executes your BABBLE programs. Several EXAMPLE BABBLE PROGRAMS, creating stories, jingles and graphics.

A complete MANUAL on the use of BABBLE with programming tips. BABBLE is written entirely in 6502 machine language and requires a minimum of 16K on a tape based APPLE II or 32K on diskette systems and the Integer Basic Rom.

PRICE: \$15.00 Cassette

\$20.00 Disk

**TITLE: CIS COBOL**

**PUBLISHERS NAME: MICRO FOCUS**

DESCRIPTION: Brings you the only standard language designed explicitly for business programming - COBOL.

Brings you the future of programming today. Program generator technology. FORMS-2 lets you create a complete program in 20 minutes - starting from a blank screen. Finishing with a fully operational program. Running.

FORMS-2 generates standard COBOL code. Use it as is. Or build on it to create even more sophisticated programs.

CIS COBOL on Apple II is standard COBOL. ANSI X3.23-1974. The most rigorous of any software standard. Which means better application portability than with any other language.

Moreover, CIS COBOL's FIPS flagging means that you can see immediately which, if any, statements you'll have to change on other Standard COBOL systems.

CIS COBOL on Apple II means all the power of ANSI COBOL file handling. And CIS COBOL's underlying B-tree technology handles large files fast - files that can grow with you in the future to hard disk systems.

Features like dynamic program loading and interactive screen handling mean that you exploit your hardware to the maximum. Letting you develop and run sophisticated business applications. Gives you a complete COBOL development system at lower cost than ever before.

Imagine, a professional COBOL - and a COBOL source code generator - tailored to the Apple II. You get work done fast that would otherwise consume expensive computer resources.

CIS COBOL and Apple II mean color. Not just because you can use Apple II graphics from within a COBOL program. You can also access the Apple II's game controllers and tone generators.

Has been certified on Apple II by the General Services Administration. Following testing procedures more stringent than for any other software. So you can buy CIS COBOL with complete security. GSA has already evaluated and validated it for you.

**PRICE:**

**TITLE: FLEX-FORTH**

**PUBLISHERS NAME: GEOTEC**

DESCRIPTION: Complete compiler/interpreter, assembler, editor, operating system.

This is a full-featured FORTH following the F.I.G. standard, and contains a 6502 assembler for encoding machine language algorithms if desired. The assembler permits macros BEGIN...UNTIL, BEGIN...AGAIN, BEGIN...WHILE...REPEAT, IT...ENDIF, and IF...ELSE...ENDIF. Editor and virtual memory files are linked to disk or tape.

In the supplied F.I.G. standard version, FLEX-FORTH executes 10



to 20 times the speed of BASIC. Code may be executed interactively, or it may be typed on to numbered screens of 1024 character blocks and edited using the included screen editor. The screen editor includes basic commands for listing, entering and deleting lines, string search, string delete or insert, switching lines, switching screens, etc. A 13 sector APPLE disk holds 105 screens, which would be an enormous program (the entire FLEX-FORTH source could be entered on fewer than 80 screens). APPLE users with 16 Sector DOS will get 140 screens per disk.

FLEX-FORTH has unlimited expandability. The F.I.G. standard form supplied is the fastest version, with defining words for constants and variables, and with integer arithmetic (single or double precision). Defining words for new data types such as strings or arrays of any number of dimensions may be added with as little as single lines of code as the need arises. The unique flexibility of FORTH is such that new data types need not be part of the basic nucleus, may be "forgotten" or may be kept on disk, so that the system's speed and compactness will always be optimal.

Over 200 instructions (words) are supplied. FLEX-FORTH is so modular that every new word module compiled becomes a new instruction. Some basic bit testing instructions are included (XOR, OR, AND), but if other low level instructions are needed, they may be compiled directly from assembly code; thereafter they would be used as any other FORTH word. FLEX-FORTH may be placed in EPROM and may be reduced greatly in size for special purposes.

**PRICE: \$30.00**

**TITLE: FORTH-79**

**PUBLISHERS NAME: MICROMOTION**

**DESCRIPTION:** MicroMotion FORTH-79 is a complete professional software system that meets all provisions of the FORTH-79 Standard. Standard programs are portable. FORTH-79 provides an interactive environment that allows for rapid program development. It's high-speed compiled code makes it especially suitable for real-time applications. Programs are more compact and run faster than in BASIC.

The base system includes a screen editor, macro-assembler, string package, 32-bit integer arithmetic, and a 200+ page tutorial & reference manual.

**PRICE: \$99.95**

**\$139.93 With enhancements**

**TITLE: FORTRAN TRANSCENDENTAL ROUTINES**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Software Supplied on diskette to utilize the capabilities of the AM9511 chip on our FFP Board with FORTRAN.

**PRICE: \$25.00**

**TITLE: HAND HOLDING BASIC**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Have you wanted to try programming in BASIC, but wished there was an easier and more effective way to learn? Hand Holding BASIC is for you.

A new, implementation of the ANSI 78 minimal BASIC interpreter for the Apple II, Hand Holding BASIC employs a dramatic, graphical approach to teaching programming and debugging in BASIC. As you write programs, Hand Holding BASIC not only checks your input character by character, but also signals errors and displays suggestions to correct them. And when you run a completed program, Hand Holding BASIC lets you use six special

display screens to follow the computer's every step.

If you're just beginning to learn the BASIC language, Hand Holding BASIC will give you a clear understanding of how its commands, statements, and other features work together to form programs. If you already know the language, Hand Holding BASIC gives you a "play-by-play" view of your favorite programs, and helps improve both your programming and debugging abilities.

Hand Holding BASIC also: automatically checks your input, character by character ... so you save time locating mistakes and learning correct syntax; provides a complete, easy-to-use debugging environment ... so you learn how to debug programs even as you learn how to write them; uses special displays to monitor how your Apple interprets your BASIC programs ... so you spot awkward routines easier, and learn how to write more efficient programs.

Hand Holding BASIC has four distinct learning "levels" that let you learn BASIC in stages, and at your own pace. You choose the programming level you want. Level 1 encompasses arithmetic expressions only, and syntax checking restricts itself to your use of numbers, pluses and minuses, asterisks, obliques, left and right parentheses, and carriage returns. In Level 2, simple variables are added, along with the corresponding syntax checking abilities. Level 3 programming introduces powers and functions. And when you choose Level 4, ANSI Minimal BASIC becomes available to you - along with a complete syntax checking on all characters entered. Level 4 also automatically triggers display of a helpful selection array (which shows valid "next" characters), if you make two successive errors.

Hand Holding BASIC provides six special display screens that monitor programs as they run in your Apple. You control execution speed - which can be slowed all the way down to single step mode, and lets you switch back and forth between display screens.

A Command Screen is used to enter stored programs and commands, and a Execution Screen simply displays output from print statements in your program. The List Trace Screen shows control passing through your BASIC statements, while the chronological Trace Screen presents a scrolled display of source statements as they're being interpreted. A monitor Screen shows the return stack, and displays monitored variables. And a For Loop Screen displays information about the interpretation of "FOR" and "NEXT" statements.

Hand Holding BASIC provides a sophisticated debugging environment, too. You're able to set or clear breakpoints on statements; to give cross reference listing for variables or line numbers; and to stop or restart at will.

To use Hand Holding BASIC, you'll need either; and Apple II Plus with 48K bytes RAM; or an Apple II with 48K bytes RAM; or an Apple II Plus with 48K bytes RAM and the Apple Language System. Plus: Auto-Start ROM; a video monitor or television; and Apple Disk II with controller (16-sector PROMs)

With the Hand Holding BASIC package, you'll receive: 1) Hand Holding BASIC master diskette; 2) user instructions.

**PRICE: \$100.00**

**TITLE: MACROLINK**

**PUBLISHERS NAME: MICROCRAFT SYSTEMS, INC.**

**DESCRIPTION:** Uses text files for source code - Links source code or object code programs - Fully nestable file include capability - Recursive macros - Nestable conditional assembly - Over 50 error messages - File I/? macros - Sample programs - Disk assembler - source code need not fit in memory.

**PRICE: \$125.00**

**TITLE: STRUCTURED BASIC**

**PUBLISHERS NAME: DECISION SYSTEMS**

**DESCRIPTION:** PBASIC-DS is a sophisticated preprocessor for structured BASIC. Now you can gain the power of PASCAL-like logic structures at a fraction of the cost. Use all regular BASIC statements plus 14 commands and 11 new statements/structures (WHILE, UNTIL, CASE, etc.). Can be used to develop INTEGER or APPLESOFT programs.

**PRICE: \$35.00**

**TITLE: SUPERFORTH**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** A stack oriented, high level language that combines the flexibility of both predefined and user defined functions. New commands are stored in a library and can be called by simply entering their names. SuperFORTH programs are actually expanded singly commands, and as such represent a new level of efficiency in programming the Apple II.

**Features:**

- transparent dictionary handling operations
- independent integer and floating point stacks
- immediate and compile modes of operation
- standard Apple high resolution graphics commands included
- utilization of Applesoft ROM floating point arithmetic subroutines
- compatible with Reverse Polish Notation- easy conversion programs written for Hewlett Packard style calculators to SuperFORTH routines
- over 150 predefined commands, grouped in 7 sections, in supplied library.

**PRICE: \$49.95**

**TITLE: TRANSFORTH II**

**PUBLISHERS NAME: INSOFTE CORP.**

**DESCRIPTION:** TransFORTH is a powerful stack-oriented language featuring PASCAL-like structured programming while offering nearly machine level control of the APPLE II. TransFORTH occupies only slightly more than 8K of RAM, is fully compiled, recursive, and unlike most versions of FORTH offers full floating point numbers. Transcendental functions, low and high resolution graphics, and music are also available while maintaining compatibility with standard DOS 3.3 files.

**PRICE: \$125.00**



## MISCELLANEOUS

**TITLE: 32K RAM****PUBLISHERS NAME: SATURN SYSTEMS**

DESCRIPTION: The old favorite for Apple users. Includes our first 3 software packages (above) with CP/M and PASCAL pseudo-disks now offered as options (\$39 each).

PRICE: \$239.00

**TITLE: A.M.P.****PUBLISHERS NAME: MICRO-SPARC, INC.**

DESCRIPTION: A.M.P. is an easy-to-use utility program that, along with any Memory Expansion Card, automatically provides you with 30% More Memory for your programs! Now you can Double or even Triple the number of records you can process with In-Memory Data Base Programs! Write Larger, More Powerful Programs which used to be impractical (or even impossible)! Reduce Data Access Time by loading 30% more data into memory at a time!

PRICE: \$29.95

**TITLE: ACTION SOUNDS AND HI RES SCROLLING****PUBLISHERS NAME: AVANT-GARDE CREATIONS**

DESCRIPTION: The purpose of this disk is to supply you with machine language sound effects, especially for Space or Combat games, and to supply you with Hi Res scrolling routines (machine language) that will move page one right or left without or with wraparound, or up 8 or 64 lines.

In addition, you're provided with our Superfront program, which allows you to type with large (from 15 x 15 to 180 x 180) keyboard characters in 9 sizes and 8 styles. With this program you may test the scroll programs, make titles or posters, printout your creations, save or retrieve what you do in sector thrifty array saved textfiles, invent new letter styles, write letters, etc.

You also get Applesoft programs (and binary and text versions too) that show you how to let laser (or whichever sound effect you choose) be the result of hitting the keyboard, a gamebutton, or a particular keyboard character.

Those of you who've been scared off by assembly or hexadecimal arithmetic may change your mind when you see how sounds are done - it's not as hard as you've been told. This may be the disk that gets you going in assembly. Or simply use our sound effects in your programs and forget how it's done, if you wish.

PRICE: \$18.95

**TITLE: AMPERSOFT****PUBLISHERS NAME: MICRO-SPARC, INC.**

DESCRIPTION: AmperSoft is a powerful and fully integrated library of machine language utilities that offers dramatic savings of both time and space - two of your Apple's most precious assets!

Working with your 16K Memory Expansion Board, and using easy-to-use commands, AmperSoft puts 5 powerful new functions at your fingertips.

&-MEMORY automatically moves DOS to provide 30% more programming memory!

&-PRINT USE provides full Print Using features for custom data output!

&-SOFT allows you to sort an array up to 60 times faster than Basic!

&-Matrix clears arrays, performs full matrix math - great for financial roll-ups!



&-DIRECTORY puts your programs under simple two keystroke access!  
PRICE: \$59.95

**TITLE: APPLE DOCTOR**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** A test program for your Apple. It can tell when your Apple needs service from your service center. The program set will test your Apple II's ROMS, your Applesoft Card, the Disk Drives, your Tape Storage System, all RAM chips, the Video display, your printer card(s), the RS-232 Communications card, and the Disk Write Protection Hardware. A really good way to protect your investment and keep hardware problems from ruining your programming efforts. The disk package is designed to spot problems before they become serious.

**PRICE: \$49.95**

**TITLE: APPLE MECHANIC**

**PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE**

**DESCRIPTION:** Another hot multiple-utility disk- Nine useful, listable, copyable & customizable programs.

**SHAPE EDITOR:** Put professional hi-res animation in your programs. Keyboard-draw any shape & let your Apple write a shape table & store it on disk. Design large/small custom typefaces too, with special characters. Many fonts on disk. LIST-able demos show how to use shapes to animate games, displays, and CHARTS & GRAPHS. A valuable time-saving utility/learning tool.

**BYTE ZAP:** A MUST utility. Rewrite any byte on a disk by loading a sector onto the screen for inspection. HEX/DECIMAL/ASCII display optional. Examine bytes via cursor control; enter hex, dec or ascii to change. Create illegal filenames, restore deleted files, change greeting program name, repair/protect disks, change DOS, examine program files. Clear illustrated instructions show how disk data is stored and how to access it.

**MORE:** A disk PACKED with useful music, text & hi-res tricks FOR USE IN YOUR PROGRAMS. Demo-writer, hi-res utilities and excellent, educational, entertaining documentation.

**PRICE: \$29.50**

**TITLE: ARCADE MACHINE**

**PUBLISHERS NAME: BRODERBUND SOFTWARE**

**DESCRIPTION:** CREATE YOUR OWN ARCADE GAMES

**NO KNOWLEDGE OF PROGRAMMING NECESSARY**

- \* Each time you use the Broderbund Arcade Machine, you will generate a new, copy-protected disk containing on it an arcade game of your own design!
- \* Your games will have the following features:
  - Animated full-color monsters and other players as designed and drawn by you! (or select from a medley of creatures on the Arcade Machine disk)
  - Dramatic shoot-'em-up explosions and sound effects
  - Automatic scoring and high score features
  - Fast-loading auto-boot to title page
  - Colorful title page with your title and name in large graphic letters (like other Broderbund games)
  - One or Two player options
  - Several skill levels
  - Optional gravity effects
  - Menu driven for easy use, regardless of age or ability!
- \* Your arcade programs are created entirely in machine language for fast and smooth arcade-quality animation.

**PRICE: \$44.98**

**TITLE: BASIC AID****PUBLISHERS NAME: EDUCATIONAL COURSEWARE**

DESCRIPTION: Contains programs and subroutines that are designed to decrease your programming time; and increase your efficiency. It includes subroutines to create sounds, produce text in graphics, make prompts that are error trapped, and provides menu routines.

Very useful for the intermediate programmer wishing to learn some new tricks and reduce programming time. There are useful utility programs on this disk for your study and use:

- Find hidden control characters
- Find the address for binary saves
- Find your program length
- Identification of useful pointers
- Sort algorithms
- And others.

**PRICE: \$32.00****TITLE: BAUDOT TELETYPE DRIVER****PUBLISHERS NAME: A B BUSCAGLIA**

DESCRIPTION: A machine language Baudot Teletype Driver program that may be relocated to any location in memory by use of an Applesoft Locator program, the program allows the user to drive a model 15, 19 or 28 type Baudot printer.

**PRICE: Cassette \$9.95****TITLE: BEAGLE BROS TIPDISK****PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE**

DESCRIPTION: Here they are, ALL of the program listings from Tip Books 1, 2, 3 and 4, typed and saved for you on disk and ready to run! Many are useful; some are not; ALL are interesting, listable and copyable. And each program teaches another elusive fact about making your Apple do its thing.

**PRICE: \$20.00****TITLE: BEGINNING BASIC****PUBLISHERS NAME: APPLIED MICROSYSTEMS**

DESCRIPTION: A menu driven interactive course in Applesoft BASIC for the beginning programmer. Twelve dynamic lessons allow the new student to learn programming the easy way. Developed by professional computer scientists, covers everything from introductory concepts all the way to looping techniques, arrays, and graphics.

**PRICE: \$30.00****TITLE: CHIPS-TTL & CMOS****PUBLISHERS NAME: MICROPRODUCTS****HARDWARE REQUIREMENTS: Integer Basic card**

DESCRIPTION: This MICROPRODUCTS program for the Apple II Computer should be a time saver to all you engineers, technicians and hobbyists that work with integrated circuits.

Are you tired of searching through manual after manual looking for the pinout on a chip that you are about to use in that trick circuit you have in mind? Have you forgotten the truth table for exclusive nor gates. Well then "CHIPS" is just the program for you!

"CHIPS" was written out of necessity by Paul Lamar, owner of Lamar Instruments. The programs contain pinouts and truth tables, where applicable, for over 100 TTL and CMOS integrated circuits. Any one of these pinouts and truth tables is displayed on the CRT in seconds after hitting return. "CHIPS" is able to do this by utilizing the high speed 6502 machine language search routines built into the Apple II disk operating system. Each pinout is treated as a separate program therefore it is only necessary for you to type; "RUN LS90" and hit RETURN. The Apple disk operating system searches the disk and displays the pinout in less than 3 seconds.

In a commercial environment the "CHIPS" program should pay for itself very quickly by saving valuable engineering time.

"CHIPS" is written in INTEGER BASIC and supplied on two disks one for TTL and one for CMOS. There are no tricks used to prevent you from making as many copies as you like. You can easily add new Chips as they are developed by using the present programs as examples thus preventing obsolescence.

**PRICE: \$49.95**

**TITLE: EDIT MASTER**

**PUBLISHERS NAME: APPLIED MICROSYSTEMS**

**DESCRIPTION:** A global source editing system for use on Apple II Plus systems. Now with single key operation, perform global editing on large basic programs in less than 1 second.

- Search for and list all occurrences of any constant, literal, or variable.
- Change all occurrences of any string, substring, variable, or number to anything you wish.
- Dump selected memory locations and produce formatted listings of Hex and ASCII values.
- Completely compatible with Konzen's PLE interfaced included.
- Utility programs included for installation of Edit Master onto your own diskettes.
- Memory size independent.

**PRICE: \$14.95**

**TITLE: FORM-IT-OUT**

**PUBLISHERS NAME: SOFTAGON, INC.**

**DESCRIPTION:** FORM-IT-OUT is a series of six individual routines in tutorial format appearing in both integer and Applesoft. Included are: cursor positioning; cursor location; right justification; center justification; text windowing; error subroutines.

Each routine contains a description, its application to programming, an explanation of how it works, a sample program listing utilizing the routine, and a RUN of the sample program.

**PRICE: \$19.95**

**TITLE: FORMULA READER**

**PUBLISHERS NAME: DATA SECURITY CONCEPTS**

**DESCRIPTION:** This program prints out or displays one column or all columns of the formulas, labels and numbers as they appear on the top of the VisiCalc screen, along with their coordinates, without chopping off the last part of long formulas.

**PRICE:**

**TITLE: HEX DEC FOR LANGUAGE CARD**

**PA-71**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Ever wish your Apple could do its own HEX Decimal conversions directly from immediate mode, while working on a program and need it the most? Simple command converts in either direction. With both positive and negative answers. Can be co-resident with our 'doubleboot for language card'.

**PRICE: \$15.00**

**TITLE: EP12 PRINTER INTERFACE**

**PUBLISHERS NAME: INTERACTIVE STRUCTURES, INC.**

**HARDWARE REQUIREMENTS: Integral Data Systems Printer**

**DESCRIPTION:** Converts your Apple Computer and Integral Data Systems Printer to A Complete Text and Graphics Output System.

-Gives you full access to all printer modes, features and commands.

-Prints the Hi Res graphics screen in up to forty different ways:

Rotation of the image

The printing size

The Hi Res page number

Position on the page

Inverse (white on black)

-Prints Super Res Graphics with up to 924 x 672 points on a standard page.

-Prints the Text screen exactly as you see it. Ideal for quick copy or menus and screen forms.

-Prints Half Tone graphics, with its 16 level Gray Scale processor.

-Lets you create your own special characters.

-Provides tab settings for indentation or column printing.

-Allows variable line spacing, variable page length, and skip over top of form.

-Tells you on the video screen if the paper runs out or the printer is off line.

-Supports Apple II, Apple III, (native or emulation mode), IDS 460 and 560.

-Compatible with all major language systems including CP/M and Pascal, and comes complete with cable, demonstration disk, and manual.

**PRICE: \$165.00**

**TITLE: IMAGE PRINTER (EPSON)**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** This is the only program available for the Epson which can print any part of the high resolution screen (visually selected), print pictures from 1.6" by 2.0" (half size) to a mammoth 6.4" by 11.7" (a partial three times size). You can print any part of the screen, picking only the highlights of the picture.

Gives you full control of how the picture will be printed. You can pick any part of the screen to print, reverse the colors of the screen, compress the image on the screen, print the image normal size, double size, or part of the image triple size. Compressed or reversed images may be printed or even saved to disk.

Image Printer- Epson is completely menu driven and simple to use. All options are invoked with single keystroke and you can even abort or only temporary halt the printing of a picture in the middle of the print out.

**PRICE: \$40.00**



**TITLE: INTEGRITY PLUS****PUBLISHERS NAME: SOLIDUS INTERNATIONAL CORP.**

**DESCRIPTION:** A complete hardware checking routine that will find any weak points in the Apple. It reliably finds intermittent memory chips, does complete disk check, including speed, head movement, and read/write capability. The ROMs are checked by internal comparison, and using disk checking procedures.

Will thoroughly test every major subsystem of your machine and give you a complete diagnosis. Hardware problems will be isolated under operating conditions.

The system first determines your configuration, checks all parts separately, then the interaction between them. It handles most printer cards, runs automatically or under manual control, and can be set to run continuously.

The documentation allows you to quickly find out if a hardware problem exists and points out the faulty subsystem. This reduces the possibility of loss and data due to hardware failure and reduces the time required to have the machine repaired.

**PRICE: \$149.00**

**TITLE: KEYBOARD RECORDER****PUBLISHERS NAME: ZEUS COMPUTING**

**DESCRIPTION:** Generates a keyboard file by monitoring and recording keyboard input. It can be used together with the System Monitor, BASIC or DOS, and is transparent to other programs receiving the input. The keyboard file can be selectively played back in a similar manner as the disk EXEC command to avoid repeated typing of the same input. A user may review the file on the screen, or save time and storage space during program development and revision by keeping records of program changes or doing automatic program testing.

**PRICE: \$25.95**

**TITLE: LABEL SPLITTER****PUBLISHERS NAME: DATA SECURITY CONCEPTS**

**DESCRIPTION:** Label Splitter creates a new text file, compatible with VisiCalc, which divides wide alphanumeric (label) entries in a selected column into two or more shorter columns.

You select any new width and any number of columns you want. VISI-CAIDS does the rest by splitting wide label columns automatically!

This new file can then be loaded into VisiCalc for more calculations giving you more flexibility and better viewability! With this utility you can quickly type wide labels into one column and choose the final column size later.

**PRICE:**

**TITLE: LABORATORY TOOL KIT!****PUBLISHERS NAME: INTERACTIVE STRUCTURES, INC.**

**DESCRIPTION:** A library of high performance driver routines written in assembly language and designed to be the software interface between Laboratory equipment and sensors, I.S. peripheral devices, and Applesoft BASIC.

- Analog Data Acquisition (A to D)

Supports the A113 12-bit and A102 8-bit Apple cards.

1. Sampling of multiple channels with a single call.

2. Rapid sampling from a single channel.

3. List-driven sampling, running from a list of channel numbers and range information.

- Analog voltage and signal output (D to A)

Supports the AD03 Apple Analog Output card.

1. Multiple channel output with a single call.
- Digital (Binary) Input and Output  
Supports the DI09 Digital Interface for Apple.
  1. Digital input from any set of data lines of the DI09.
  2. Digital output from any set of data lines.
- The Assistant, a menu-driven BASIC program for managing devices and channels by name, and requesting the various input and output operations.

Supplied on a DOS 3.3 (16-sector) disk which contains the LTK assembly language routines, the Assistant, and a sample system configuration for three interface cards. The Assistant may be used directly or modified to suit the application, or the LTK routines may be copied to other disks for custom applications. All external connections and their associated names and ranges are set up once and stored in a configuration file. Then they may be referred to by name, not number. The configuration resides on disk, and they may be easily edited using the Assistant. Multiple disks may be used for different applications, so changing the terminology to match the experiment or test under way is as simple as changing a disk. An extensive manual is included which describes both the individual LTK routines and the Assistant in detail.

**PRICE:**

#### **TITLE: LITTLE TRICKS**

**PUBLISHERS NAME: SOFTAGON, INC.**

**DESCRIPTION:** LITTLE TRICKS is a series of tutorials on programming techniques for the advanced beginning programmer. How to: round a number to the nearest hundredth place; make the program know when a certain key is pressed; set and use flags; simple sorting technique; solve equations by successive approximation (iterative solution) AND MUCH, MUCH MORE!! Twelve routines in Applesoft - Seven routines in Integer. Each routine contains a description, it's application to programming, an explanation of how it works, a sample program listing utilizing the routine, and a RUN of the sample program.

**PRICE: \$19.95**

#### **TITLE: MEMORY TEST**

**PUBLISHERS NAME: COMPUTER COMPONENTS, INC.**

**DESCRIPTION:** This program writes data to each location defined by the user, reads it back, compares it, and prints the bad memory location.

**PRICE: \$7.50**

#### **TITLE: MPE (MEMORY-PAGE-EDITOR)**

**PUBLISHERS NAME: COMPU-TRON SOFTWARE SERVICE**

**DESCRIPTION:** A compact (1.8K) machine language programming utility. Designed for the experienced programmer as well as the novice, it extends the power of disk access and program editing. A single keystroke is all that is required to edit, read or write a sector or send the display to a printer. Consists of a current status line that is visible at all times. It shows the current address range, the last track and sector accessed, the drive number and location of the DOS BUFFER. It also displays a HEX and ASCII dump of the current address range (80 hex bytes). Scrolls through memory faster than any program currently available, updating the display every new page allowing a visible search for occupied or free memory. Editor is capable of editing in HEX positive and negative ASCII (i.e. high bit set or clear). Editing is accomplished through

direct memory access. This means that the display is the editing buffer and scanning memory for programs is as simple as pressing one of the error keys. No more memory moves to get your program into a fixed buffer. MPE puts the buffer where your program is. Disk access module supports two drives and multiple buffers. This provides complete freedom for comparing two disks or transferring sectors from disk to disk. The number of disk buffers are limited only by the free memory available. With a simple keystroke the DOS buffer can be relocated to the current video display.

Also allows zeroing a block of memory (100 HEX bytes) with a single keystroke. A USER function is provided to allow the programmer to incorporate his own routines into MPE.

A powerful program for Post-Editing BASIC or Machine Language programs as well as a disk access utility. It allows undeleting files, renaming files, creating files and any other use, limited only by your imagination and ingenuity.

Comes with a manual describing its operation and step by step examples of how to use it.

**PRICE: \$49.95**

**TITLE: NUMERIC KEYPAD**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Simulates a numeric keypad. With a simple command, a 3 by 3 matrix of keys and the space bar are assigned the function of simulating the numeric keys 0 through 9. Keypad simulator can be used with running and convenience of a numeric keypad. This program is supplied with an instructional program that describes how to use it.

**PRICE:**

**TITLE: OK 12 PRINTER INTERFACE**

**PUBLISHERS NAME: INTERACTIVE STRUCTURES, INC.**

**HARDWARE REQUIREMENTS:** Okidata Microline Printer Model 80 thru 83, 82A, and 83A

**DESCRIPTION:** Converts your Apple computer and Okidata Microline printer to a complete text and medium resolution graphics output system.

-Gives you easy access to all printer modes, features, and commands.

-Introduces a standard, easy to use language for software or keyboard printer control.

-Built in Hi Res Graphics screen printer with a simple command, 8 different ways. You choose:

Printing size, 8" x 10" or 8" x 11.5"

Hi Res Screen 1 or 2

Inverse (white on black) printing

-Built in Text Screen Snapshot, ideal for quick copies of screen menus, catalogs, forms.

-Adds a standardized Tab function: Tab to any column or to multiples of 8 columns.

-Tells you on the video screen if the paper runs out or the printer is switched off.

-Supports Apple II, Apple III, CP/M, Pascal, and easily adds printing to existing programs.

**PRICE: \$165.00**

**TITLE: PRINT FILE READER**

**PUBLISHERS NAME: DATA SECURITY CONCEPTS**

**DESCRIPTION:** VisiCalc data can be saved for use with Basic programs using the "/PF" command ("/PD" for DOS 3.2). The Print



File Reader displays or prints the contents of those files the same way VisiCalc prints out normal files. This eliminates the need for booting VisiCalc if no more calculations need to be made and enables files to be read over modems and on Apples with as little as 16K.

**PRICE:**

**TITLE: PROGRAM UNLOAD**

**PUBLISHERS NAME: POWERSOFT, INC.**

**DESCRIPTION:** A utility program designed to copy Applesoft II and/or Integer Basic programs from disk to cassette tape. Groups of programs or a single program may be copied any number of times in one operation. The program is an excellent means for creating a "back-up" of a disk.

**PRICE: \$7.45 Tape**

**TITLE: QUICK CLOCK ADJUST**

**PUBLISHERS NAME: TELEPHONE SOFTWARE CONNECTION**

**DESCRIPTION:** Finally you can adjust your computer's clock as easily as your digital watch! Just change the portion you want while the clock still runs. (EX: change just the hour for daylight savings.) Works with Superclock II, Thunderclock Plus, Apple Clock, CCS Clock (rev. A or B) and the CPS Card.

**PRICE: \$15.00**

**TITLE: RAM TEST**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** A test program that provides peace of mind during RAM expansion by testing the installed RAM.

**PRICE: \$7.50 Tape**

**TITLE: SCROLL CONTROL**

**PUBLISHERS NAME: SOFTAGON, INC.**

**DESCRIPTION:** Have you ever wondered why you cannot list an integer Basic or Applesoft program one screen-page at a time? So have we, and we did something about it! Our machine language Scroll Control, hidden in RAM so as not to "bump" into your program, can be engaged or disengaged at a stroke of the keyboard. Why be frustrated when instead you can control the scroll?

**PRICE: \$ 9.95 Cassette**

**\$14.95 Disk**

**TITLE: SLIDE SELECT PROGRAM**

**PUBLISHERS NAME: LEGEND INDUSTRIES, LTD.**

**DESCRIPTION:** For use with the 64 KC and 128 KDE cards, the Legend Slide Select program allows quick retrieval, control and display of Hi Res pictures automatically. Great for demonstrations and displays.

**PRICE:**

**TITLE: SMARTYPE**

**PUBLISHERS NAME: SOFTSMITH**

**DESCRIPTION:** Upgrades your Apple Silentype Printer to a high quality text printer by adding the following features: New character fonts, 60, 80, 96 and 120 characters per line, lower case letters with true descenders in one pass. Recognizes type faces created by the following font editor programs; Apple DOS



3.3 Tool Kit Animatrix, Synergistic Software's Higher Text, Mountain Hardware's Keyboard Filter Font Editor, Programma's The Typesetter. Also includes a stand alone utility to dump a Hi-Res picture to the silentyte as a regular or full page.  
**PRICE: \$29.00**

**TITLE: SOFT SEVENTY**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** With SOFT SEVENTY there is no need for those expensive hardware boards that cost up to \$400.00. Using the Apple II hi-res screen, you get a 70 column display of 4X8 dot matrix characters for use in your programs.

\* TEXT MAY BE INVERTED, WINDOWED, OR MIXED WITH GRAPHICS.

\* INCLUDES SPECIAL GRAPHIC FONT, AND YOU CAN ADD YOUR OWN.

\* USE WITH ANY INTEGER, APPLESOFT, OR MACHINE LANGUAGE PROGRAM.

**IDEAL FOR:**

\* Word processor applications.

\* Business applications requiring more data displayed than a normal Apple screen provides.

\* Labelling complex graphs and charts.

\* Game use in which text and graphics can be mixed anywhere on the screen.

**PRICE: \$69.95**

**TITLE: SOUND ON**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Add sounds to your next educational program to keep your students alert. This disk is a collection of sound effects and short melodies that may be used to reduce student boredom and increase attention span while working with computer assisted instruction. Includes melodies such as Clementine, and Saints Go Marching in as well as sound effects such as phasers and warning alarm.

**PRICE:**

**TITLE: SUPER SOUND**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**DESCRIPTION:** A machine language program which you can use to produce a wide variety of squeaks, groans, howls and roars. Of course you can use it for musical sounds, but its primary purpose is to produce the complex sounds found in such things as thunder and automobile engines. The machine language program can be accessed from any integer BASIC or Applesoft program (with certain memory restrictions) to add the rich dimension of sound to your programs. You can use Super Sound's built in explosions, gunshots, sirens, etc., or you can use the noise and tone generators to create your own sounds. The package comes complete with documentation and a demo Applesoft program.

**PRICE: 16K Tape \$12.95**

**32K Disk \$16.95**

**TITLE: TAPE LOAD AIDS**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** Two Utility Programs to assist in the accurate Loading of Programs and Data from Tape Cassettes. The first provides an Audible Speaker Signal as your tape is loading to confirm the start and end of the Load process. The second provides for Auto-Retry if errors are encountered and for Auto-Transfer to BASIC or RUN following the Load completion.

**PRICE: \$24.95**

**TITLE: THE AUTOMANIAC SYSTEM****PUBLISHERS NAME: THE GEEGERY SOFTWARE WORKS**

**DESCRIPTION:** The AUTOMANIAC SYSTEM comes complete with two sub-systems. When the AUTOMANIAC SYSTEM is used with the EXECUMANIAC SYSTEM, and the GSW INTROL PROGRAM, your Apple will run itself! At last, a computer that works for you!

The AUTOMANIAC SYSTEM continually checks the time and date from an onboard clock. When the pre-programmed time arrives, the AUTOMANIAC SYSTEM will execute either a program or a series of commands that you have scheduled. You can run programs that require keyboard input, and this keyboard input will come from special command lists you have created with the EXECUMANIAC SYSTEM. With the GSW INTROL PROGRAM and a Mountain Hardware Introl/X-10 controller card, you can control electrical devices in the Apple's environment on a scheduled basis.

If you are going to be a serious user of your Apple and still maintain a large data base of information, then you need a lot of computing time. THE AUTOMANIAC SYSTEM can increase your Apple's computing power by running 24 hours a day!

During the night on Mondays, Wednesdays, and Fridays, you can schedule the program that sorts your accounts receivable data. On the 15th of every month you can schedule a series of programs that will turn your printer on at 7:00 P.M., print out the bills at 7:05 P.M., and after all the printing is finished, the printer is turned off. During the day your computer won't be bogged down doing file maintenance, but instead will be free to access all that valuable information.

The AUTOMANIAC SYSTEM comes packaged with a GSW notebook, a 34-page easy-to-use operating manual, and a 3.3 DOS diskette.

**PRICE: \$100.00**

**TITLE: THE BASIC TEACHING PAC****PUBLISHERS NAME: CREATIVE SOFTWARE**

**DESCRIPTION:** Learn both of the Apple's BASIC languages with this 2 disk set. Better than 150K of program to take you from a beginner to an advance programmer.

**PRICE: \$42.00**

**TITLE: THE BRAIN SURGEON (A DIAGNOSTIC PACKAGE)****PUBLISHERS NAME: NIKROM TECHNICAL PRODUCTS**

**HARDWARE REQUIREMENTS:** FP in ROM. FOS or 3.3.

**DESCRIPTION:** Check every major area of your computer, detect errors, and report any malfunctions. The Brain Surgeon will put your system through exhaustive, thorough procedures, testing and reporting all findings.

The test includes:

- Motherboard ROM test
- Applesoft ROM Card test
- Integer ROM Card test
- Disk Drive speed calibration
- Disk Drive maintenance
- DC Hayes Micromodem II test (Hardware and Eprom)
- Monitor and Modulator routines
- Monitor test pattern
- Monitor skewing tests
- Monitor text page test
- Monitor and TV yoke alignment
- Lo Res Color tests
- High Res Color tests
- Random Hi Res generator

- Speaker function tests
- Square wave modulation
- Paddle and speaker test
- Paddle and button test
- Paddle stability
- Internal maintenance
- General maintenance
- On board "help"

**PRICE: \$49.95**

**TITLE: THE INTEGER FIX**

**PUBLISHERS NAME: BARRINGTON EDUCATIONAL COMPUTER COOPERATIVE**

**DESCRIPTION:** The INTEGER FIX is a utility program for the Apple II+ computer. The program makes it easy to convert disks containing programs written in Integer BASIC so they may be run on the Apple II+, which will normally only run programs written in Applesoft BASIC.

The INTEGER FIX comes on DOS 3.3. The software will operate on Apple systems with either one or two disk drives. Conversion consists of "booting" The INTEGER FIX and then providing the names of Integer programs on the disk. The program will make the necessary changes and additions to the disk software to allow operating both Integer and existing menu programs or inter-program communication, e.g. one program calling another, will not be affected by the conversion, even if the programs are in different versions of BASIC.

The menu which is presented upon booting The INTEGER FIX provides the following options: Instructions for use, Convert a program, Catalog a disk.

Conversion is effected without intervention by the user unless the program disk or disk being converted is not available in one of the disk drives. Extensive error trapping makes The INTEGER FIX virtually fool-proof, and very user-friendly. Converted disks operate just as an un-converted disks would on an Apple with an Integer BASIC firmware card installed. The one-time conversion process is easy enough for the most novice user. This software has been tested by first-time Apple owners, people with as little as a week of hands-on experience with micro-computers. Prior to the availability of The INTEGER FIX, the owner of a standard Apple II+ with 48K of RAM had three alternatives to choose among if they wanted to run Integer BASIC programs:

- 1) Purchase an Integer BASIC firmware card
- 2) Use a 16K (or more) RAM or Language Card, and load Integer BASIC from disk when needed, e.g. by booting the DOS 3.3 System Master
- 3) Load Integer BASIC into RAM prior to running an Integer program.

In the case of loading the language onto a memory card, the software frequently became inaccessible after booting up anew disk, necessitating reloading or machine language fixes. Loading Integer into a 48K Apple frequently results in the Disk Operating System (DOS) being wiped out (with cassette versions of the language) or limitations on the size of Integer program which can be handled. Versions of disk based Integer language typically occupy the same region of memory used by Applesoft programs, which means they have to be separately reloaded after any Applesoft program is loaded.

Many organizations selling software for the Apple have access to both BASICs, so many disks have programs written in both languages on them. Examples of such disks are those available from Computer Using Educators, San Mateo, CA.; International Apple Core, Santa Clara, CA.; and many local Apple users groups. Some excellent software written in Integer BASIC, e.g. Apple



Computer's Shell Games, has previously been inaccessible to the standard Apple II+ owner. This has left many Apple II+ owners with the choice between the expense of firmware or additional memory, or the hassle of having to "manually" load the language. This latter approach usually renders most "Menu" programs useless in moving from one program to another on a disk containing programs in both languages. The INTEGER FIX offers a less expensive and more effective approach.

**PRICE: \$20.00**

**TITLE: THE TOOL**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**DESCRIPTION:** Designing attractive entry screens, validating, formatting, and storing user input, as well as providing the user with handy screen editing capabilities take up most of a programmer's time and the computer's memory. The Tool streamlines all these important, but repetitive, aspects of BASIC programming, eliminating a lot of work and code.

Provides an entry screen generator, a database manager, and a report formatter, each with very sophisticated capabilities.

**Entry Screens-** the Tool allows you to make attractive, useful entry screens a standard part of your programs. It handles all screen editing, field formatting, and entry validation for you.

**Characters Validations-** Alpha, numeric, blank, yes or no, signed values, password, Radix 50, decimal point, and dollars and cents.

**Field Validations and Formats-** Range, not in range, equal, not equal, valid entry, not valid entry, valid date, defaults, dollars and cents, left justify, right justify, leading zeros, invisible field, basic check, and 100th of cent.

**Database-** The Tool Operating System (TOS) allows files to span multiple disk drives. Whether you have four 20 megabyte drives or 8 floppy drives and 254 disks, TOS can use the storage space as one large file or several- it's up to you.

The database manager of the Tool offers: fast read and write, read and write directly to variables, over 15 million records, sequential and random access, multiple disk drives, partial and masked key lookup, Corvus or floppy disk drives, and record length as large as memory.

**Reporting-** The report generator offers easy report definition, define reports directly on screen, multiple column widths, Cobol pictures, calculations at print time, totals, paging, subtotals, page numbering, headers, and title.

The Tool uses less memory than old conventional programming methods. The Tool is already tested, saving testing and debugging time. The Tool's many features can be used from BASIC giving ultimate flexibility.

**PRICE: \$395.00**

**TITLE: ULTIMATE TRANSFER**

**PUBLISHERS NAME: MICRO WARE**

**DESCRIPTION:** An easy way to transfer Integer, Applesoft, or Machine Language programs over the phone. Uses D.C. Hayes Micromodem.

**PRICE: \$25.00**

**TITLE: uSPEED**

**PUBLISHERS NAME: APPLIED ANALYTICS, INC.**

**DESCRIPTION:** The microSPEED Language System combines the benefits of compiled code and hardware arithmetic processing for the maximum in microcomputing performance. Developed from an extended version of Forth, the System is ideally suited to the



serious Apple user.

THE POWERFUL, PAINLESS ALTERNATIVE TO BASIC AND PASCAL  
Runs six to sixty times faster than Basic  
Programming capabilities well beyond Applesoft  
Auxiliary Processor (Am9511) for fast Floating Point  
High-speed, extended high resolution graphics  
Software development time cut in half  
Exceptionally compact, compiled code  
Extensible, structured language to meet your needs.  
Bonus: Increased speed Applesoft functions

PRICE: \$495.00 Complete System

\$ 35.00 Manual Only

**TITLE: UTILITY BOOK**

**PUBLISHERS NAME: BEAGLE BROS MICRO SOFTWARE**

DESCRIPTION: Has something for everyone; printer utilities, program changers, copyright protectors of one kind and another, and excellent Applesoft lister that everyone wants to use, a text screen formatter, Command Zap, Filename Zap...you'll love it! Twenty-one utilities total plus a crisp new Tip Book and hot Peeks and Pokes Chart all in one package. It'll keep you off the street for weeks!

PRICE: \$29.50

**TITLE: UTILITY I**

**PUBLISHERS NAME: BERLINERSOFT**

DESCRIPTION: Designed for The Data Factory user interested in obtaining even greater flexibility in the use of The Data Factory data base. Allows the user to transform any Data Factory created file (excluding printer formats) into sets of accessible variables for use within another program or a custom printer routine. The program is listable, copyable,, and the complete documentation fits neatly into the Data Factory binder. Works with The Data Factory version 4.0.

PRICE:

**TITLE: V.I.P. II**

**PUBLISHERS NAME: MICRO-SPARC, INC.**

DESCRIPTION: Answering questions about your VisiCalc spreadsheet can be a problem...unless you have V.I.P. II. V.I.P. II is an unusual companion to VisiCalc that produces printed reports of all important spreadsheet formulas in a variety of formats to suit you specific needs.

V.I.P. II allows you to

entry of the commands: FP, NEW, INT., it searches memory for the end of the last program and when found resets all system pointers back to their original settings before the program was lost.

-Automatic Line Numbering- You specify the starting line number and the line number increment, from then on it is totally transparent to your programs and keyboard commands. Line numbers will be automatically entered as part of a program line when the space bar is the first character entered on a new line. Can be disconnected by a one key command, or if line numbering exceeds 63999, it will disconnect itself.

-List Control- Brings the Apple's LIST command under your control by allowing you to select the rate of speed that characters, from a program listing, are put to the screen. This can be done, at any time, by pressing any one of the digit keys from zero, the fastest output, to nine, the slowest output, during the listout. The listout can be stopped and started any time to allow you to study or review a program, or you can select the Page At A Time

feature. This will list to the screen 20 lines of program text and then stop and wait for your command to list the next page of test, or continue with the controlled character output speed. Can be interrupted at any time for a new listout or for the purpose of aborting.

The Ampersand command is used to address the different functions of Utility ROM and if required Utility ROM can be instructed to disconnect itself from the Ampersand command and return its original vectors prior to initialization.

**PRICE: \$39.95**

**TITLE: V-UTILITY**

**PUBLISHERS NAME: YUCAIPA SOFTWARE**

**DESCRIPTION:** V-Utility consists of all these VisiCalc "User Friendly" Utility programs on one disk run by Index and Prompts. V-PRINT- With this program you may select those columns you want to print on the printer and place them in any order you select. A flexible printing utility that also will print sheet equations. V-STAT- Program collects data automatically from the VisiCalc column and calculates numerical distribution, correlation coefficient, regression analysis, CHI test, and T-test. You may select the columns for data entry and specify the row# to start and row to end data collection. Program is easy to run.

V-PLOT- This program automatically inputs data from a VisiCalc column, performs auto scaling then plots either 1 or 2 columns on a regular line printer (graphics not required). Ideal for analyzing up to 250 numerical data points in relation to time.

V-OVERLAY- Provides the following selection of overlays to load on to the VisiCalc sheet. Moving Averages, Exponential Smoothing Equations, Time Series Trend Analysis, Date Columns.

**PRICE: \$99.95**

**TITLE: V.I.P. II**

**PUBLISHERS NAME: MICRO-SPARC, INC.**

**DESCRIPTION:** Answering questions about your VisiCalc spreadsheet can be a problem...unless you have V.I.P. II. V.I.P. II is an unusual companion to VisiCalc that produces printed reports of all important spreadsheet formulas in a variety of formats to suit your specific needs.

V.I.P. II allows you to print your formulas by row, column or even in a grid format...just the way it appears in your model! No other VisiCalc utility can offer such flexibility.

So don't be caught short in reconstructing your model's logic and assumptions. V.I.P. II...it's almost like having a portable Apple. Please specify DOS 3.2 or 3.3 when ordering.

**PRICE: \$29.95**

**TITLE: VC-EXPAND**

**PUBLISHERS NAME: SATURN SYSTEMS**

**DESCRIPTION:** Expand memory available to Personal Software's 16 sector VisiCalc. Add 32K, 64K, or even 128K to your present workspace (even if you already have 16K card in use!) with this program plus one or more Saturn boards. Simple operation.

**PRICE: \$100.00**

**TITLE: VIDEOTERM UTILITIES DISC**

**PUBLISHERS NAME: VIDEEX, INC.**

**DESCRIPTION:** The VIDEOTERM UTILITIES DISC is a collection of programming aids for the Videx Videoterm 80 column card. Included on this disc are programs to allow the user to display

Mid-Resolution graphics mixed with text, to create character fonts, draw forms on the screen, read characters from the Videoterm's memory and to add top and bottom scrolling windows. All of these programs are fully functional on the standard Videoterm. The Font Editor requires the use of an EPROM programmer to create character font chips. The Mid-Resolution graphics routines work in both Pascal and BASIC. Mid-Res graphics are black-and-white graphics that may be freely mixed with text anywhere on the 80 column screen. Line Drawing Graphics may be freely mixed with text under Applesoft to draw a business form or other shape. Top and bottom window scrolling is now possible under Applesoft with the scrolling routines. A read screen utility has even been added to allow the Applesoft user to read the Videoterm screen at any time, any place, even from 40 column mode. To top the package off, we have included the Vidpatch utility for Pascal 1.1 users with Firmware 2.0 through 2.3.

**PRICE: \$37.00**

**TITLE: VISIBLEND**

**PUBLISHERS NAME: MICRO LAB**

**HARDWARE REQUIREMENTS: 2 Disk Drives**

**DESCRIPTION:** Allows users of Visicalc to combine the data in multiple Visicalc files merging data across files.

**PRICE: \$50.00**

**TITLE: VISIFACTORY**

**PUBLISHERS NAME: MICRO LAB**

**DESCRIPTION:** Allows for a marriage between Data Factory and Visicalc files. You can move data in either direction, manipulate it within the chosen program, and then store it either way. It is an exciting tool for market research, information surveys, and analysis of any selected data.

**PRICE: \$75.00**

**TITLE: WIDTH ADJUSTER**

**PUBLISHERS NAME: DATA SECURITY CONCEPTS**

**DESCRIPTION:** Column A:20 characters wide. Column B 6 characters wide. Column C 9 characters wide! Now you can print or display VisiCalc models with variable width columns. If you use VisiCalc in conjunction with a printer you will really appreciate what the Width Adjuster can do to improve printed reports. Want a column smaller than 3 characters? Width Adjuster can print a column ONE character wide! You can even simulate a split screen when the "in between" columns are assigned a new width of zero.

**PRICE:**



## PASCAL UTILITIES

### **TITLE: ABTOOL I**

**PUBLISHERS NAME: ADVANCED BUSINESS TECHNOLOGY, INC.**

**DESCRIPTION:** Cross Reference Generator- Generates a listing of a Pascal program and a table of lines in which each identifier appears. The cross reference program automatically includes files just as the UCSD Pascal compiler does, skips over comments and string constants, and ignores reserved words. The system processes input programs of unlimited size without using any scratch files. The listing can be routed directly to a printer, with the cross reference generator optionally providing page breaks and headings.

**Version Compare-** Makes a line by line comparison of two text files, reporting the fewest lines of differences encountered or that line files are identical. If additional lines are found within one of the files the system automatically resynchronizes on later lines which are identical. This utility is ideal for determining the differences between versions of a file or what changes have been made since an older copy of the file was saved.

**Split, Concatenate-** Split accepts as input a large text file, one too large to edit, and breaks it up into editable size text files. Such files are potentially created by program output, including output of the cross reference generator if directed to a file rather than to the printer. Concatenate performs the inverse operation of combining a series of text files into one large text file. Since the usage of these utilities is always associated with large files, and since the naive programs to implement them would be painfully time consuming, this tool makes available a sophisticated and extremely efficient, implementation of these functions.

**Pagination-** Copies input text file to designated output file (or device), placing an optional header across the top (or bottom) of each page (length of page user selectable) which includes the file name and/or the page number and/or a user specified message. Lines (user settable number) are skipped for page breaks. Optionally, the program will pause before each page for fresh paper to be inserted in the output device. An option is provided for driving a 45 cps printer at 12 baud without handshaking and without overrunning the device.

**Maketexe, Makedate-** These tools translate into and out of UCSD text file format, changing data files with ASCII data into text files and text files into ASCII data files. Control of which character code to use for line termination in data files is provided. These functions are extremely useful if data files are to be manipulated by the text editor or if files are to be moved to or from other systems which do not recognize text file conventions.

**PRICE: \$75.00**

### **TITLE: ABTOOL II**

**PUBLISHERS NAME: ADVANCED BUSINESS TECHNOLOGY, INC.**

**DESCRIPTION:** Patch- Allows the interactive inspection, editing, and printing of arbitrary binary files in hexadecimal. ASCII interpretation of the file is also made available to the user in parallel with the hexadecimal representation. The user may arbitrarily operate on blocks of the file in any order, or multiple times. Each modification of a block of the file is considered temporary and can be discarded until the user explicitly causes the disk version of the modified block to be updated. Patch can operate directly on a disk, providing access to directory areas and ignoring file boundaries.

**Binary File Compare, Disk Verify-** Reports the byte position of



the first difference encountered between two arbitrary (.CODE, accepts wild card file designations and performs the compare on a file by file basis so that, for example, comparing #4:= to #5:= is equivalent to bad block scanning, and actually checks not only that all of the blocks are good, but also that the data is accurately represented.

P-Code Disassembler- This tool will display very educated guesses of the P code instructions contained in a .CODE file produced by the Pascal compiler or the FORTRAN compiler. When used in conjunction with Patch, programs can be changed without recompilation or even having the source.

Pattern Grabber- Searches a text file for the specified pattern, much like the text editor, and reports each line in the target file that contains a match for the pattern. Under user optional control, grep processes include files in the same manner that the Pascal compiler does and reports the file and line in which the pattern occurred. Optionally the search pattern may be restricted to Pascal tokens. Optionally, the searched pattern may be replaced with another pattern so that global editing changes can be done to an entire program, with all of its included files.

Arbitrary Text File Generator- None of the widely available editors on the Apple Pascal System allow nonprinting characters to be placed in a text file. It is woefully hard to get, for example, the backspace character into a text file so that underlining can be done in a straight forward manner. Moreover, the newest version of the Apple Pascal Operating system utilizes files in a certain format as exec files (files from which console commands are executed) which have nonprinting characters in them and which can not be produced by the available text editor. This utility solves these problems in the most general way by transforming a file produced by the editor (with certain prescribed character sequences interpreted by the tool) into a file with an arbitrary sequence of characters.

**PRICE: \$75.00**

**TITLE: APPLE PASCAL**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Apple Pascal is a fully professional system development environment. It incorporates the UCSD Pascal Operating System (Version 2.1), with enhancements for color graphics, sound generation, and Apple's special input/output features. Because it offers a compiled language, the Pascal system allows programs to execute more quickly and to take up less space than they would in BASIC. The structured programming facilities and extensive data structures in Pascal make it the language to choose for large business, scientific, and educational programs.

Apple Pascal...increases programmer productivity because it provides a total software development facility...simplifies program design through Pascal's convenient structural mechanisms and rich variety of data types...lowers development costs, as extended built-in error checking routines catch syntax, type and range errors...lowers maintenance costs because Pascal's modular structure minimizes convoluted code which is difficult to understand and modify...allows programs larger than available RAM to run, through the use of memory and modified through the utilization of a powerful, easy-to use editor...supports Apple's special graphics and sound capabilities, plus control paddles, through system library routines...is the most transportable of all languages: it allows access to large libraries of Pascal programs and provides the capability to run your own programs on most Pascal systems...offers a performance increase of two to

five times over equivalent BASIC programs.

Apple Pascal has been designed for the sophisticated programmer or computer science student. Its richness of data typed, control functions, and powerful utility routines can dramatically improve a programmer's productivity on large projects. For this reason, Apple has selected Pascal as its standard system and applications development vehicle.

Why UCSD Pascal?

Since UCSD Pascal is recognized as the microcomputer industry standard using it as a basis for Apple Pascal gives a programmer portability. Not only can a user access large libraries of Pascal programs already in existence, Apple Pascal programs can run with minimum conversion on most computer systems offering Pascal.

UCSD Pascal is more than a language: compiler, assembler, editor, linker, and file handler are integrated with a single, powerful system. This provides the user with a comprehensive set of software tools for optimal program development. Built-in procedures and functions enhance the string, byte, and I/O capabilities. Both 36-digit integers and 32-bit floating point are supported.

Why Apple Pascal?

Apple has taken advantage of all of UCSD Pascal's capabilities and can offer others as well. These include:

Easy access to Apple's human interface features: color graphics, speaker, control paddles, and keyboard; transcendental functions' faster disk response and transfer rates; extensive documentation. To use the Apple Language System with Apple Pascal, you will need the following system:

Apple II or Apple II Plus each with 48K memory; Apple Disk II with controller\*; (a maximum of six drives are supported). Video monitor or television.

\*While a single drive system is adequate for very small programs, two drives are strongly recommended for ease of operation and more serious program development.

Diskettes; 16 sector format

Editor: Editing functions include cursor control, test modification, formatting, searching and marking capabilities. The Editor offers:

Fast, screen-oriented editing for program development and text editing; 80-character lines (upper/lower case) available with external CRT terminal; 80-character lines supported in standard Apple using horizontal scrolling.

Editor Commands; Jump, page, write, find, insert, replace, delete, exchange, copy, zap, verify, quit, update, exit, return, adjust, margin set marker, set environment, auto-indent, filling, left margin, right margin, paragraph margin, command character, and token default.

Compiler:

Pascal source text is translated into P-code.

A group of one or more source language procedures or functions can be compiled separately as a UNIT, allowing a large program to be subdivided into smaller, more manageable parts. Commonly used procedures and functions can be compiled once, stored in a library file, and accessed by other programs through the Linker. EXTERNAL routes can be declared and are later linked into the host program by the Linker.

Compiler option specifications can be embedded in the source text to control listings, screen messages, range-checking, inclusion of separate source files, and other compiler parameters.

Compiler Options:

- C - Following characters are placed directly into codefile
- G+ - Allows GOTO statements
- G- - Forbids GOTO statements

I+ - Generates I/O checking Code  
 I- - NO I/O checking.  
 Ifilename - includes named source file in compilation.  
 L+ - Sends compiled listing to SYSTEM.LST.TEXT  
 L- - Makes no compiled listing.  
 Lfilename - Sends compiled listing to named file.  
 P - Pages listing  
 Q+ - Suppress screen messages.  
 Q- - Sends procedure names and line numbers to CONSOLE.  
 R+ - Generates range-checking code for array subscripts and variables.  
 R- - No range checking  
 S+ - Puts compiler in swapping mode.  
 S++ - Compiler does even more swapping  
 S- - Non-swapping mode: entire Compiler in memory.  
 U+ - Compiles on user lex level  
 U- - Compiles on system lex level.  
 Ufilename - Specifies name of library file for finding UNITS.  
**6502 Assembler:**  
 Permits relocatable assembly language routines to be generated for linking to Pascal programs.  
 Supports parameterized macros.  
 Assembler Directives. Delimiting Directive for Routines: .PROC, FUNC, .END.  
 Label Definitions and Space Allocation Directives: .ASCII, .BYTE  
 Macro Facility Directives: .MACRO, .END.  
 Conditional Assembly Directives: .IF, .ELSE, .ENDC.  
 Pascal Host Communication Directives: .CONST, .PUBLIC, .PRIVATE.  
 External Preference Directives: .DEF, .REF.  
 Listing Control Directives: .LIST, .MACROLIST, .NOLIST, .NOMACROLIST, .PATCHLIST, .NOPATCHLIST, .PAGE, .TITLE.  
 File Directive: .INCLUDE.  
**Linker**  
 Combines compiled P-code or assembled machine code files into the system work file or another specified code file. This eliminates the need to recompile or reassemble existing code files when incorporating them into a program Designates any procedure or function at the P-code level as a SEGMENT, which means that its code can be swapped in and out of memory.  
 Resolves references in compiled code to UNITS or EXTERNAL routines before program execution.  
**File:**  
 Handles the tasks of transferring information, i.e., storing and retrieving data on disk, moving and deleting disk files, creating and modifying diskette directories. Reports the location of files on diskette and what devices and diskettes are available.  
**File Commands:**  
 GET, SAVE, NEW, WHAT, VOLUMES, LIST DIRECTORY, EXTENDED DIRECTORY LIST, REMOVE, TRANSFER, DATE, PREFIX, BAD BLOCKS, KRUNCH, MAKE, ZERO, QUIT, XAMINE, CHANGE.  
**System Utilities Include:**  
 Desk calculator - performs simple calculations: addition, subtraction, multiplication, division.  
 Disk Formatter - prepares new disk for use with the Apple Pascal system.  
 System Librarian - links separately compiled or assembled routines into a library file.  
 System Library contains:  
 The "Turtlegraphics" code unit, which provides easy access to Apple's High Resolution color graphics routines. Functions and procedures permit the user to choose a color, move and turn the cursor, specify viewport boundaries, fill the viewport with color, copy an array of data to the screen from memory, write text on the graphics screen, and interrogate the system regarding



the state of the cursor and screen. It adds the following procedures and functions: INITTURTLE, TEXTMODE, GRAFMODE, VIEWPORT, PENCOLOR, PENMODE, SCREEN-COLOR, FILLSCREEN, MOVETO, TURNT0, MOVE, TURTLEX, TURTLEANG, SCREENBIT, DRAWBLOCK, WCHAR, WSTRING, CHARTYPE.

The "Apple Stuff" code unit, which contains routines to generate random numbers, interfaces with the control paddles, and generate sounds on the Apple's speaker. It adds the following procedures and functions:

RANDOM, RANDOMIZE, PADDLE, BUTTON, TTOUT, NOTE, KEYPRESS.

The "Transcend" code unit, which contains transcendental functions useful for mathematical calculations. It adds the following procedures and functions:

SIN, COS, ATAN, EXP, LN, LOG, SQRT.

The following is a list of maximum size limitations in the current implementation of USCD Pascal:

Maximum number of bytes of object code in a PROCEDURE or FUNCTION is 1200. Local variables in a PROCEDURE or FUNCTION can occupy a maximum of 16383 words of memory.

Maximum number of characters in a STRING variable is 255.

Maximum number of elements in a SET is  $32 * 16 = 512$

Maximum number of SEGMENT PROCEDURES and SEGMENT FUNCTIONS is 16. (Six are reserved for the Pascal system, ten are available for use by the user program.)

Maximum number of PROCEDURES or FUNCTIONS within a segment is 127.

**PRICE:**

#### **TITLE: INTEGER PASCAL SYSTEM**

**PUBLISHERS NAME: M & M SOFTWARE, INC.**

**DESCRIPTION:** A Pascal language subset. Includes a compiler, interpreter and translator. Other utilities and a text editor are included to comprise the complete system.

Features two operating modes: interpreter executing P-Codes or 6502 code translated from P-Codes running directly on the 6502 processor. The interpreter offers debugging, trace, and single step operation for the debugging of new software and understanding the operation of the P-Codes. The translator produces 6502 code versions of P-Code programs usually after debugging on the interpreter. Under certain benchmarks, execution times of 14 times faster than Integer BASIC have been made by translated 6502 code.

Integer Pascal is an Integer data type implementation of the Pascal language. Specifically Integer, Integer arrays (any dimension) and index types are followed. The arrays can be any size or dimension. The index variables are high speed index register locations in base page which are very fast and ideal for loop indexes or array subscripts.

All common control structures are available: if-then-else, while-do, repeat-until, for-do, case-of-else.

Functions and procedures are fully recursive. Any number of input parameters can be used.

Decimal and Hexadecimal input and output are supported as are HEX constants and character constants. Apple ROM routines can be called from Integer Pascal programs and Apple memory can be accessed as bytes or words.

Many built in functions are incorporated in the compiler. Among these are RND, SQR, SQRT, BASE, STACK, BITS, BITC, SWAB, PADDLE, ABS and others.

Procedures and functions can be stored in text or compiled object form in disk files for inclusion in compiles. Compiled form allows fast inclusion of commonly used routines in your programs with a simple compiler directive. Text files of procedures,



functions or other Pascal Text can be included in compiles with the include directive which allows common data definitions or other common programs segments to be used in a number of programs.

A text editor based on the DEC-10 SOSCX editor is included for the writing of Integer Pascal programs. The editors powerful alter mode allows character editing of a single line. The editor uses regular DOS 3.2 text files.

PRICE: \$65.00

**TITLE: KAREL THE ROBOT**

**PUBLISHERS NAME: CYBERTRONICS INTERNATIONAL, INC.**

**DESCRIPTION:** Introducing The Karel Simulator, a complete programming/de-bugging environment for Apple II computers running Pascal. It helps you master vital programming skills by making you the master of a very versatile robot. He can be programmed to escape mazes, run hurdle races, and more. And while you help him avoid walls, he helps you break down learning walls.

Karel's language is an expertly tailored version of Pascal that serves as an excellent introduction to structured programming and computer literacy.

A Course Disc is also available, offering a clear, step-by-step program of increasingly challenging problems and solutions for Karel the Robot to accomplish. It is invaluable when used to help develop a classroom curriculum, or as a personal learning tool. Already, it is being used in universities and high schools.

You can enjoy this unique, hands-on learning experience that Karel the Robot now makes possible.

PRICE: \$150.00 The Course Disc

\$ 7.00 The Book "Karel the Robot"

**TITLE: LINKDISK**

**PUBLISHERS NAME: LINK SYSTEMS**

**DESCRIPTION:** A free-standing PASCAL utility program which was designed to fill the need of the PASCAL programmer for manipulating individual bytes of PASCAL mass storage media.

In addition, in order to ease the transition for those who want to upgrade their applications systems from BASIC to PASCAL LinkDisk provides a facility for translating data files, both TEXT and BINARY, from DOS 3.3 volumes to PASCAL volumes.

Used to examine disk data one block at a time in both hexadecimal and ASCII format, and change data on mass storage at the nibble level. At the volume level, this function works on DOS 3.3 as well as PASCAL disks.

**THE LIST FUNCTION** - allows selective or complete listing of all the text files on a volume, with page numbering, line numbering, dates and headings. Once the parameters are set, LinkDisk will generate all the requested listings without further intervention.

- Will perform a byte for byte comparison of two PASCAL files or volumes

- This is particularly useful for ensuring that a disk copy was performed without error and that the resulting copy is indeed readable.

- It is also useful for determining whether a given file has changed since a backup was made, and what that change might have been.

- At the volume level this function works on both DOS 3.3 and PASCAL disks.

**THE BASIC FUNCTION** - A multi-option function to get a DOS 3.3 catalog, list DOS 3.3 file information and convert DOS 3.3 files. The conversion option permits the user to move binary (memory

image) files from DOS 3.3 disks to PASCAL data files. It also allows the conversion of DOS 3.3 text files to PASCAL text files.

**PRICE:**

**TITLE: LINKINDEX**

**PUBLISHERS NAME: LINK SYSTEMS**

**DESCRIPTION:** A Pascal unit that provides the Pascal programmer with a rapid key retrieval system for data files. With LinkIndex, data files can be "keyed" on one or more fields, allowing extremely fast data retrieval via these keys.

Employs the sophisticated B-Tree indexing method to build its index file. A B-Tree is a balanced, multi-way tree structure that guarantees efficient key retrieval, insertion and deletion. In less than a second, you can retrieve one record from 25,000 records on a Corvus and one record from 8,000 with an Apple floppy disk system.

LinkIndex builds an index file with the keys you provide in your program. You need not concern yourself with the details of the index file. Keys and their associated data records are inserted, deleted and searched with five simple functions.

- Multiple keys can be maintained in one index file
- Duplicate keys are supported.

- Keys can be string, integer or long integer.

- String keys can be 1 to 80 characters long.

The index file automatically grows as the number of keys expand.

The index file never needs reorganization.

LinkIndex maintains keys in sorted order so keys can be quickly retrieved without a sort.

No restrictions are imposed on your data file organization or its contents.

LinkIndex includes a tutorial, sample program, detailed reference guide and an introduction to file access methods.

- Creates new Index file

- Opens an existing index file

- Closes an index file

- Enters key in B-Tree

- Removes key from the index file

- Searches for a key of equal or greater value, along with data record number

- Retrieves the next key after the last key searched

- Retrieves the next key before the last key searched.

**PRICE:**

**TITLE: LINKVIDEO**

**PUBLISHERS NAME: LINK SYSTEMS**

**DESCRIPTION:** The screen utility for Apple PASCAL

A multi-functional programming tool to give your system that professional look by providing a host of control functions and data input and output routines.

Not only that, but LinkVideo is provided in source as well as P-Code, so that you can fine-tune the unit for your special needs.

LinkVideo provides your program with complete device independent code for:

HOMECURSOR - moves the cursor to the upper left corner

CLEARSCREEN - homes the cursor and clears

CLEARLINE - clears the line the cursor is on to spaces

EraseEOS EraseEOL - same as clear except from cursor position

UP, DOWN, LEFT, RIGHT - cursor repositioning

KEYUP...KEYRIGHT - table entries for checking operator input

Provides a standard and simple format for PUTting to and GETting from the display device most of the field types that a programmer might want, with total protection from illegal keyboard entries

as well as calculator style input for numbers.

The field types supported by LinkVideo include STRINGS, BOOLEANS, Phone Numbers, Social Security Numbers, Dates, INTEGERS and Long Integers, which can be scaled as Pseudo REALs for financial or other precision data.

Provides terminal independence, input data filtering and crash-proofing. It simplifies standardizing of screen layouts and ensures consistency of field handling from program to program.

By easing the task of generating professional interactive sequences, LinkVideo greatly reduces the amount of time required in the coding effort.

**PRICE:**

**TITLE: PAS-LOW**

**PUBLISHERS NAME: APPLE VALLEY SOFTWARE, INC.**

**DESCRIPTION:** Upper/lower case input on your Apple keyboard in Pascal. Simple to implement. Simple to use (one key shift). Permanent software modification to your system. No need to run a program after every boot. Four choices of display:

1. Upper/lower case direct (using Dan Paymar chiptm)
2. Lower case inverted
3. Upper case inverted
4. Standard Apple video display

**PRICE: \$35.00**

**TITLE: PASCAL INTERACTIVE TERMINAL SOFTWARE**

**PUBLISHERS NAME: MICRO SOFTWARE SYSTEMS**

**DESCRIPTION:** The P.I.T.S. package allows you to use your Apple II and your D.C. Hayes Micromodem II as a very intelligent terminal that can communicate with other systems over the telephone lines at either 110 or 300 baud ASCII.

While you are connected to the other system, the software maintains a 24K copy buffer. You can at any time copy all data going through the modem into the copy buffer, and then store it to disk as a standard PASCAL text file which can later be accessed with the PASCAL editor.

The buffer is capable of holding about 15 typewritten pages of data, which is more than you can effectively handle with the PASCAL editor. Very large files can often be saved onto disk by pausing the output of the remote system and saving out the buffer before restarting transmission. Huge data files have successfully been transmitted in this manner.

At any time, you can transfer any text file on your disk to the other system. Provision is made for transferring a character at a time for slow systems, or a line at a time for packet switching networks. Provision is also made handling systems that send back input prompt characters.

**FEATURE SUMMARY**

Dial out thru program, optional delay characters.

Source code on diskette so that initial values such as screen width, baud rate and duplex mode can be user selected.

File transmit capability.

24K cop buffer. Buffer commands include:

- Copy on
- Copy off
- Save buffer
- Clear buffer

Simultaneous printing of data passing thru modem

Full/Half duplex and 110/300 Baud rate toggles.

Leave and return to program without losing modem connection

This program has been developed using our Pascal Utilities Micromodem Package (PUMP), and has been tested extensively on a



wide variety of timesharing systems.  
**PRICE: \$34.95**

**TITLE: PASCAL LEVEL 1**

**PUBLISHERS NAME: ONGOING IDEAS**

**DESCRIPTION:** Consists of a subset of the standard Pascal as defined by Jensen and Wirth. It includes the structured programming features: IF-THEN-ELSE, REPEAT-UNTIL, FOR-TO/DOWNTODO, WHILE-DO, CASE-OF-ELSE, FUNCTION and PROCEDURE. It also includes the pseudo array MEM to allow memory peeks and pokes. Disk I/O is also supported within the Pascal READ and WRITE statements.

A complete package that allows you to create, compile and execute programs written in Pascal. The source and object code are automatically saved on disk. Sample programs and a users manual are included.

**PRICE: \$35.00**

**TITLE: PASCAL LOWER CASE**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**HARDWARE REQUIREMENTS:** Language system and lower case adaptor

**DESCRIPTION:** Converts the Pascal BIOS for the entry and display of lower case letters. It is currently the only available modification that is compatible with both versions of Pascal (1.0 and 1.1). The Pascal version is automatically checked prior to updating Apple system. If you have any of the hardware lower case adaptors, you can now input the following characters directly form the keyboard. This modification does not interfere with any of the Control character functions normally implemented by the Pascal environment and will undo any alterations made by other commercially released modification. Pascal Lower Case is designed for 40 column monitor or television usage. It is not intended to work with 80 column boards since they are supplied with their own lower case drivers.

**PRICE: \$25.00**

**TITLE: PASCAL MASTER DIRECTORY**

**PUBLISHERS NAME: KEITH HARREL**

**DESCRIPTION:** Provides the ability to maintain a complete list of all your Pascal disk directories. Included is the ability to store 850 file names along with the volume name the file resides on and file size, date, and type. Each volume is added by inserting the disk into the drive. The master directory can be listed to the console, or printer. The directory may be sorted by volume name or file name. Entire volumes may be added or deleted.

**PRICE: \$20.00**

**TITLE: PASCAL PROGRAMMER**

**PUBLISHERS NAME: THE DENVER SOFTWARE CO.**

**HARDWARE REQUIREMENTS: 16K Expansion Card**

**DESCRIPTION:** Reduces approximately 70% of your programming efforts. It lessens the drudgery of coding and recoding your detailed routines. And you can achieve fast record retrieval from disk - usually any record in less than one second.

The modules provide a wide variety of functions. They help you develop application programs, handle most common needs, and assist you in solving your detailed programming problems. Also, the modules can be easily modified for specific applications by setting parameters and adding or deleting portions of the



modules. Because complete program listings are included in the manual, the y can be applied to any Pascal-based computer without the use of the included disks.

#### THE MODULES

There are five categories of modules supplied, each of which is included in source form.

- General Utility - handles a majority of the interaction between the user and the application, such as data entry, prompting for responses, displaying screens and error or warning messages.
- Sorting and Searching - allows the programmer to maintain access paths to tiles or sorted lists in memory.
- Disk File Access - allows the programmer fast and easy access to fixed length records.
- Report and Display - centralizes form control procedures in programs which generate either screen or printer output.
- Disk-Copy ng - copies or transfers information from one disk to another within an application program.

**PRICE: \$125.00**

#### **TITLE: PASCAL PROGRAMMING TOOL**

**PUBLISHERS NAME: SOFTPAK ASSOC.**

**DESCRIPTION:** Written to aid you, the Pascal programmer, in both programming and file maintenance.

Allows you to modify any data stored on disk including the disk directory. The modifications can be made in either Hex or ASCII. With the PPT you can convert from ASCII to Hex and Hex to Pascal Integer format.

Compiling a large Pascal program can often be a time consuming process. With the PPT you can modify the Pascal object code thus saving a re-compile.

The PPT has a search command which allows you to locate data by file or disk unit. With the print command the currently displayed block of data from the disk can be printed. The PPT also allows you to display packed array structures.

**PRICE: \$59.95**

#### **TITLE: PASCAL SOFT-DISK EMULATOR**

**PUBLISHERS NAME: GREAT LAKES DIGITAL RESOURCES**

**DESCRIPTION:** Supports the simulation of up to four fast access disk drive units for the storage and retrieval of standard Apple Pascal 1.1 disk files.

The Soft-Disk software provides access to every byte of RAM memory on the Legend RAM card(s) using standard Apple Pascal 1.1 disk commands including RESET, REWRITE, OPEN, CLOSE, READ, WRITE, BLOCKREAD, BLOCKWRITE, UNITREAD and UNITWRITE.

The system is very versatile. Each simulated Soft-Disk can be configured using either the Legend 64KC or 128 DE RAM card(s). Completely slot independent, permitting maximum flexibility when installing the Legend RAM card(s).

Follows the ATTACH-BIOS protocol established by Apple Computer for attaching custom peripherals to the Apple Pascal 1.1 Operating System.

Totally compatible with Apple Pascal 1.1; its use introduces no hardware dependencies with respect to software use and development. Software designed to be compatible with Apple Pascal 1.1 will function properly when used in conjunction with the Pascal Soft-Disk Emulator software and the Legend 64KC or Legend 128KDE card(s).

**PRICE: \$49.95**

**PUBLISHERS NAME: ADVANCED BUSINESS TECHNOLOGY, INC.**

**DESCRIPTION:** Two packages indispensable to serious Apple Pascal users in handling large programming and other projects: Pascal Tool I for text files and Pascal Tool II for binary and code files.

**PRICE:**

**TITLE: PASCAL TRANSCENDENTAL ROUTINES**

**PUBLISHERS NAME: COMPUTER STATIONS, INC.**

**DESCRIPTION:** Software supplied on diskette to utilize the capabilities of the AM9511 on our Fast Floating Point Board (Stock #7001) with Pascal. Available separately for those who have already purchased the CSI FFP Board.

**PRICE: \$25.00**

**TITLE: PASCAL TUTOR**

**PUBLISHERS NAME: THE DENVER SOFTWARE CO.**

**DESCRIPTION:** A complete software package which utilizes your computer to teach you UCSD Pascal.

Written to be used in conjunction with the textbook, making the course truly interactive. All chapters are available at all times, so the textbook is a valuable reference or review tool after the course is completed.

The Pascal Tutor program in menu driven, letting the operator choose from a table of contents so anyone can use it easily. The textbook that comes with the course is written in plain English, with no complex or hard to understand computer terms.

**Topics Covered:**

-Starting Up- Provides an introduction to the system.

-Data Types- Includes an explanation of standard data types- strings, integers, and so forth- and shows you how to use them.

-Variables and Constants- Names and their location in memory; how information is stored within a program.

-Procedures and Functions- Explains what they are and how to use them.

-Programming Structures- Introduces you to the organization of a Pascal program.

-Comprehensive Review and Exam- Allows you to review the text and to test your knowledge.

**PRICE: \$125.00**

**TITLE: PSORT**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Solve your Pascal disk file sorting problems with PSORT, a stand-alone program that can also be incorporated into other Pascal programs as a ready-made routine. PSORT lets you sort files through a wide variety of user-defined keys, such as name, ZIP code, age, account number, and more. A unique selection option lets you further specify which records are to be included or excluded in sort and merge processes.

With PSORT, you can choose between fixed or variable-length recorded and fields, and test or string files - so you enjoy a high degree of programming application flexibility and convenience. You can also select all critical system parameters, including number or sort keys, files to be merged, fields per fixed-length record, characters per record, and characters per field. And full source code is provided, so you can even modify PSORT's procedures to meet your particular needs.

PSORT also: can be called as a procedure from a user program...so you cut costs by reducing development time; provides up to 10, user-redefinable sort keys with mixed ascending/descen-

ding sequences...so you have comprehensive sorting capabilities at your fingertips; can merge up to 10, user definable, pre-sorted files...so you consolidate large files more efficiently; supports multiple disks for input, output, and work files...so you can fully utilize diskette storage space; lets you supply parameters either through interactive prompting, or through a control file that's set up only once...so it's easier for you and others to use the program.

Anyone with Pascal programming experience will find PSORT easy to use. Just compile the PSORT programs - provided in Pascal source code - and execute them in the usual way. PSORT leads you step-by-step through the sorting process. Merging is easily done, too. Just enter the file names of the input files to be merged, whether they reside on the same or different disks.

Using PSORT's include/exclude option is simple and straightforward. Suppose you're sorting a mailing label list, and you want to exclude all labels in a certain ZIP code area. Just indicate "Exclude" when prompted, specify the field number, and enter the excluded ZIP code as the selection value. Automatically PSORT will omit any label with the undesired ZIP code as the selection value. Automatically PSORT will omit any label with the undesired ZIP code when sorting.

To use PSORT, you'll need: an Apple II or Apple II Plus with 48K bytes RAM; an Apple Language System; an Apple Disk II with controller (16-sector PROMs); a video monitor or television. With the PSORT package, you'll receive: 1) PSORT program diskette, containing source code, executable code, a parameter program to set up a control file, and a sample Pascal program that uses PSORT as a procedure; 2) PSORT user manual

**PRICE: \$85.00**

#### **TITLE: UCSD p-SYSTEM**

**PUBLISHERS NAME: SOFTECH MICROSYSTEMS**

**DESCRIPTION:** You can do it too, with SofTech Microsystems' unique software development and execution environment, the UCSD p-System.

Our UCSD p-System is the only genuinely machine-independent operating system for 8-bit and 16-bit microcomputers. And to over 50,000 end-users and scores of applications developers it is the one proven, reliable answer to software obsolescence.

For software development, it allows you to work in any combination of UCSD Pascal, FORTRAN-77, BASIC, and assembly language. It provides support for dynamic memory management and multi-tasking, with a full arsenal of powerful enhancements, such as a versatile Screen Editor, Native Code Generators, a Print Spooler, TURTLEGRAPHICS and XenoFile, for easy access to CP/M disks and files.

Users report that our UCSD p-System's friendly, fast and compact execution environment makes it their first choice in software. If you're buying or developing software for your Apple, your best move is to our UCSD p-System. Nothing else touches it.

**PRICE:**

#### **TITLE: BRIDGE**

**PUBLISHERS NAME: ANALYTIC SOLUTIONS, INC.**

**DESCRIPTION:** A file conversion tool designed to move Apple Pascal files into DOS 3.3 format and DOS files into Pascal readable form. The user can edit BASIC programs under the UCSD/Apple full screen editor, read DOS 3.3 files with a Pascal program, and access DOS binary files from Pascal in their original byte for byte format.

**PRICE: \$90.00**



## **SORTS**

### **TITLE: AMPER SORT II**

**PUBLISHERS NAME: ALAN G. HILL SOFTWARE**

**DESCRIPTION:** A general purpose machine language sort routine for Applesoft BASIC. It features an easy to use BASIC interface command to pass sort parameters. It will sort one or two dimensional string arrays in ascending or descending order and one dimensional integer floating point arrays in ascending order. String arrays may be sorted up to 5 sort keys; some or all array elements; and on some or all characters in the array element. A 1200 element array will sort in about 10 seconds.

**PRICE: \$19.95**

### **TITLE: AMPER-SEARCH**

**PUBLISHERS NAME: ALAN G. HILL SOFTWARE**

**DESCRIPTION:** AMPER-SEARCH is a high speed machine language routine for an Applesoft Firmware Card or Language Card System that will search a string array for the first in all occurrences of a specified character string. A search of a 2000 element array will take less than 1 second. The subscript(s) of the matching elements are returned in an array. Parameters are passed to name the string array, define the character string, define the search bounds and name the variables to receive the matching subscripts and number of matches.

**PRICE: \$14.95**

### **TITLE: AMPER-SORT/MERGE (A-S/M)**

**PUBLISHERS NAME: S & H SOFTWARE**

**DESCRIPTION:** Applesoft BASIC and machine- language utility; uses Apple- licensed DOS 3.3, BASIC & CHAIN.

AMPER-SORT/MERGE is a general-purpose disk sort/merge utility for Apple DOS text files.

1. Machine-language file read, sort and merge routines for speed. Can sort 1000 records in seconds.
2. Sorts records alphanumerically (ascending or descending order) on up to 5 fields.
3. Sorts up to 5 input files into a single output file (up to at least 125K).
4. Sorts random or sequential text files.
5. Merges 2 to 5 pre-sorted files into a single file.
6. Sort parameters may be input from the keyboard or from a special parameter file.
7. Compatible with most data base programs that create standard DOS 3.3 text files e.g., VisiCorp's Visifiles (superseding Personal Software's CCA DMS files).

**PRICE: \$49.95**

### **TITLE: DATACOPE SINGLE DISK SORT**

**PUBLISHERS NAME: DATACOPE**

**DESCRIPTION:**

Increase the data handling capabilities of your Apple manyfold, by simply utilizing Datacope's FAST Single Disk Sort in conjunction with your own programs. You will discover your files rearranging with lightning fast speed, in any order you desire. Read further for the exciting answers to your sorting need.

It is a very fast disk file sorting program for the Apple II series of computers, designed to rearrange random-access text files. It will sort one file by up to 10 key fields simultaneously, with each field in either ascending or descending alphabetic or numeric order.



#### WHO USES THE DATACOPE SINGLE DISK SORT?

A regional magazine for their 25,000+ subscriber file, a church for their membership files, a TV station for special news feature research, a nuclear chemist, teachers, librarians, secretaries, OEM software suppliers, and many others.

#### WHEN IS THE DATACOPE SINGLE DISK SORT USED?

Whenever it is desirable to rearrange the order of the records in a file. For instance, let's say you have a mailing list of customers and you need to print lists in three different orders, one in order by name, another in order by account number, and a third in order by zip code, and name within each zip code area. The Datacope SDS will physically rearrange your mailing list file according to each separate requirement.

#### WHAT WILL IT DO?

Your processing time will be speeded greatly, increasing the productivity of your computer. The throughput of our computer will increase greatly and you will be able to tackle larger tasks than before. And the one sort program will work for many different tasks.

#### EQUIPMENT REQUIREMENTS

More than one Disk II drive is permissible and 8" drives may be used with the Sorrento Valley Associated controller card. A version is available for the Corvus hard disk drive upon special order.

#### CAN IT BE MODIFIED INTO A TURNKEY SYSTEM?

Yes. The Datacope SDS is driven by an Applesoft BASIC program which can be modified for specific purposes. This BASIC Program passes the sort instructions to a machine-language program that uses all the available memory below DOS to sort the file. Upon completion of the sort it can execute a DOS command of your choosing and tie back into your program.

#### CAN THE DATACOPE SDS BE USED AS A SUBROUTINE?

It cannot be used as a subroutine, it must be employed as though it were a stand-alone Applesoft program. It will, however, execute any DOS command of your choosing upon completion of sorting. For example, you could run a program or invoke an executive file.

#### DOES IT REQUIRE A SPECIAL FORMAT?

Yes. To be sorted, a file must be randomly accessible (i.e. opened to a fixed record length), and the sort keys must begin in a fixed location within each record.

#### MUST FILE FORMATS BE REDEFINED WITH EACH SORT?

No. The user has to option to save sort parameters to disk for later recall and use with the same file or file format.

#### HOW LARGE A FILE WILL IT SORT?

Up to a full diskette (one volume) of data in a single file. For example, on a 5 1/4 inch diskette, roughly 102,3000 bytes, and on can 8 inch diskette, roughly 240,896 bytes. The Datacope SDS will not sort more than one file at a time, nor will it sort sequential files, perform merges, or perform an in-memory array sort.

#### WHAT DOES THE PACKAGE INCLUDE?

All of Datacope's software is recorded on high-quality 5 1/4" diskettes. Included is the diskette and a full-size comprehensive manual. The diskette has the Datacope Single Disk Sort program, test-file access programs, and the File Fixer program.

**PRICE: \$49.95**

#### **TITLE: HYPERSORT**

#### **PUBLISHERS NAME: MORNINGSTAR**

**DESCRIPTION:** A machine code sorting routine for any Applesoft arrays. Remarkable easy to add to your new or existing programs.

1. Easily sorts any single dimensioned Applesoft array at rates of 1000 Integers/4 sec, 1000 Reals/5 sec, 1000 Strings/6sec.
2. May select sorting of any two arrays in parallel in a standard KEY array/Record array format for easy disk file sorts.
3. Any sized array (i.e. # of elements) that can be normally fit in your size Apple can be sorted (Needs No working space!). Estimated maximum sizes for a 48K Machine with DOS are: 15000 Integers, 10000 Reals, 1000-00000 Strings.
4. Option for reverse sorting.
5. Optional "in use" signal on screen during sort.
6. Relocatable to any unused memory location you want.
7. Perfect for all general uses, including: Business files, Name/Addresses/Phone Lists, Alphabetizing, Any type of ordering
8. Easy to understand instructions with a step-by-step demonstration to help you learn how to effectively use Hypersort in your own programs.
9. A simple CALL starts the sorting process, such as: CALL 36700 Zip ()
10. Demonstrations programs included- with plenty of REMARKS.
11. Option to sort any subrange of any array.
12. Automatic error checking on all sorting options with a regular "bell" and Applesoft error codes when a user error is encountered.
13. Uses the standard Heapsort algorithm for guaranteed fast sorts with efficient memory usage.
14. As a bonus, all Hypersort packages include DISCARD, a simple machine code program that allows you to "undimension" any array to release more memory during a program run.
15. Extra Bonus: A documented subroutine in Applesoft which allows you to sort a file without having to open up a "scratch" file. A must for those "monster"- sized files.

**PRICE: \$29.95**

**TITLE: KRAM**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** Keyed Random Access Method. Modeled after system used on IBM Virtual Storage mainframes. 6502 machine language program provides ultra-fast keyed retrieval/storage of data in either direct or sequential mode, by either full or partial key valued.

**PRICE: \$79.95**

**TITLE: SINGLE DISK SORT**

**PUBLISHERS NAME: DATACOPE**

**DESCRIPTION:** A fast disk-oriented machine language sort program. Uses only one disk drive and can sort a full diskette of data with up to ten key fields. Completely compatible with Rainbow Computing's Filemaster I & II programs, Pascal Language System, and Sorrento Valley 8" disk drive controller. If you want to use this program with Filemaster I, ask Rainbow for a special version of SINGLE DISK SORT.

**PRICE:**

**TITLE: SORT**

**PUBLISHERS NAME: MATRIX SOFTWARE**

**DESCRIPTION:** A 6502 machine language in-memory sorting algorithm of commercial quality for Apple owners. Most sorts are accomplished in less than a second and large sorts take only a few seconds. The algorithm is a diminishing increment insertion

sort, with optionally chosen increments. There are no conditions under which SORT performance degenerates or fails. SORT requires almost no user set-up operations. It handles integer, floating-point, and string arrays plus arrays of more than one dimension. In addition, multi-key sorting of string arrays has been enabled. The user may specify the character within a string to begin sorting on and how many characters are to be evaluated.

SORT is capable of performing up to twenty of these multi-key sub-sorts (on matches found) at the same time.

SORT on the Apple II via a quality slot independent EPROM board. Board includes function driver that supports 16 EPROM based functions for user EPROMS. Apple EPROM card includes SORT, text screen dump and function driver.

PRICE: \$110.00

**TITLE: SUPER KRAM**

**PUBLISHERS NAME: UNITED SOFTWARE OF AMERICA**

**DESCRIPTION:** MULTIKEY SUPPORT - Allowing simultaneous access to a KRAM file by more than one key field.

**HI-SPEED READ** - This feature allows increased I/O speed up to 60% faster during processing of SUPER KRAM read next, read previously, put and delete requests.

**IMPROVED INDEX ARCHITECTURE** - Allowing faster index searchers and more efficient disk space utilization.

**INTEGRATED BASIC COMMANDS** - Allowing SUPERKRAM commands to be coded in-line with Basic, providing easier usage of KRAM than ever before.

**USER SPECIFIABLE BUFFER POOL** - Allowing the user to specify how many KRAM files are allowed open at one time; will support any number of KRAM files.

**LOGICAL RECORDS (KEYS MAY BE NON-UNIQUE)** - Records added to the KRAM files are immediately accessible by any of the defined keys for the file (Automatic Upgrade).

KRAM 2.0 files are totally compatible with SUPER KRAM.

PRICE:

**TITLE: SUPER SORT**

**PUBLISHERS NAME: A B BUSCAGLIA**

**DESCRIPTION:** A utility disk sort program for a single drive Apple II

Operation: sort text files, file cabinet "indexfiles", or random files. It is designed to read and input file from disk, sort it into the desired sequence and create a sorted output file on disk. The number of records that can be sorted is dependent on the amount of memory available. Using the random tag file option, nearly a full diskette of data may be stored.

To use the program, simply follow the program prompting. The program will read the input file, sort the file, and create a sorted output file. The output file may be displayed on the CRT monitor if desired. The sorted output file is available for processing by your integer or applesoft basic programs.

**Features:**

- works on Apple II or Apple II Plus
- designed for a single drive system
- easy to use; written entirely in Applesoft basic
- creates a sorted output file on the same or different diskette
- uses a fast shell sort routine
- sorts text files, file cabinet indexfiles, and random files
- provides the option of creating tag files to process against random files
- using the tag sort option, multiple sort fields may be specified

- provides for optional CRT display of the sorted output file
- can sort numeric or alphanumeric, ascending or descending sequence
- variable position keys
- not protected, so you can make copies (for your own use) as desired.

**PRICE: Cassette \$9.95**  
**Disk \$12.95**

**TITLE: SUPER SORT & SEARCH**

**PUBLISHERS NAME: PROGRESSIVE SOFTWARE**

**DESCRIPTION:** A free-form data-base pkg. which allows the User to define fields per record. As the data is loaded in it is automatically sorted. Can also merge together files or allow key sort entries. Will sort out a particular field, do a generic search and/or search for a specific piece of data. Will allow each particular record or records to be printed.

**PRICE: \$69.95**



# SPECIAL INTEREST

AIR FLIGHT SIMULATION . . . . .	SI-1
AIRCRAFT IDENTIFICATION . . . . .	SI-1
AMATEUR RADIO LOG . . . . .	SI-1
AUTOMOBILE TROUBLESHOOTER . . . . .	SI-1
BIRDBREED . . . . .	SI-2
CLOCK 3 . . . . .	SI-2
DIET ANALYSIS . . . . .	SI-3
DISK-BASED MAILING LIST OF U.S. CONGRESSMEN & SENATORS . . . . .	SI-3
DISKETTE DUPLICATING SERVICE . . . . .	SI-3
DOCUMENTATION . . . . .	SI-4
ELIZA . . . . .	SI-4
FLIGHT SIMULATOR . . . . .	SI-4
FLIGHT VECTOR . . . . .	SI-5
LINEAGES . . . . .	SI-5
MICRO-ATLAS . . . . .	SI-6
MORSE CODE SYSTEM . . . . .	SI-6
POLITICAL PARTY MAILING LIST . . . . .	SI-6
PRO-PIX '81 . . . . .	SI-6
SUBLIM . . . . .	SI-6
THE COIN COLLECTOR CATALOG . . . . .	SI-7
THE FLIGHT PLANNER . . . . .	SI-8
THE FOOTBALL COMPU-STAT . . . . .	SI-9
THE STAMP COLLECTOR . . . . .	SI-10
THE STAR GAZER'S GUIDE . . . . .	SI-10
THE STRAIGHT LINE . . . . .	SI-11
THE WORD PROCESSOR . . . . .	SI-11

**TITLE: AIR FLIGHT SIMULATION**

**PUBLISHERS NAME: INSTANT SOFTWARE**

**DESCRIPTION:** Your aircraft is on the runway loaded with fuel, instruments feeding the computer a constant stream of information.

A glance at your flight screen gives you airspeed, altitude, and compass heading. After you take-off, the all important Ascent/Descent-Turn/Rank Indicator will tell you the altitude of your aircraft at a glance, whether you are climbing or diving, whether you are banking into a left or right turn.

Your mission is a short one. You have a maximum possible range of about 50 miles, on one precious tank of fuel. Your objective is to take-off, fly the aircraft, and land without crashing.

You may not have been at the controls of an aircraft before. The basic flight instructions enclosed will be invaluable. Included are explanations on basic aerodynamics and principles of flight, plus illustrations telling you how to recover from dangerous maneuvers.

Your aircraft will respond rapidly to the controls, and your movements must be delicate. Too much airspeed and your aircraft could explode from overstress. If the airspeed is too slow, you might stall and crash. A clumsy turn, and you might find yourself flying upside down, fighting to regain control.

It will take a few hours of light time, before you can take-off and fly correct flight plan. By then you will be expert enough to attempt aerobatic maneuvers.

With Air Flight Simulation and enough flight time, the sky's the limit!

**PRICE: \$9.95**

**TITLE: AIRCRAFT IDENTIFICATION**

**PUBLISHERS NAME: RAINBOW COMPUTING**

**HARDWARE REQUIREMENTS: paddle input in entertainment mode**

**DESCRIPTION:** Can draw over 40 aircraft from WWI to present, in Hi-Res, 3-D graphics. It has 3 different options. ENTERTAINMENT - for 1 or 2 players. Each Aircraft draws randomly a line at a time in various scales and 2 different views. See if you can "name that plane" first. EDUCATIONAL - Learn to recognize famous aircraft on sight. Become an aircraft expert. DEMO - Demonstrates the Apple's many capabilities and runs through a "slide show" of over 40 aircraft including the name of each.

**PRICE: \$19.95**

**TITLE: AMATEUR RADIO LOG**

**PUBLISHERS NAME: ALEX MASSIMO**

**DESCRIPTION:** Use for QSO's, contests, field days, DX, etc. Has 7 functions. Full info for revising to your needs.

**PRICE: \$19.95 Cassette**

**TITLE: AUTOMOBILE TROUBLESHOOTER**

**PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS: Centronics 739 printer with grappler interface**

**DESCRIPTION:** Before you visit the mechanic, let the computer help diagnose your automobile's ails. Great aid- educational.

**PRICE: \$25.00**

**TITLE: BIRDBREED**

**PUBLISHERS NAME: EDUTECH**

**DESCRIPTION:** Birdbreed is a genetics program for the Apple II.

Plus computer, simulating the inheritance of color in the parakeet. Written by the Australian geneticist Judith Kinnear, Birdbreed is based on a valid genetic model featuring accurate biological information.

The program is designed for the exploration of genetic principles, and provides sixteen breeding groups of birds of defined phenotypes. By breeding birds in simulation, the student may accumulate up to 100 birds for the analysis of genotypes and patterns of inheritance. Clutch sizes vary from four to eight fledglings, and the variations observed in small populations in nature are incorporated into the program. Crosses may be performed between any two birds within a breeding group, and illustrate the phenomena of dominance, codominance, sex linkage, independent assortment, multiple alleles, gene interaction, and linkage between genes.

Birdbreed is designed to complement laboratory experiments in genetics with Drosophila or other organisms, not to replace them. Because the emphasis is on genetic analysis based on the breeding results, the student views genetics from a different perspective from that learned by performing crosses with organisms of known genotype.

The colors of the parakeets- blues, greens, yellow, grey, and white- and of the wing markings- black, grey and brown- are rendered most effectively with a color monitor.

PRICE: \$95.00

**TITLE: CLOCK 3**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** Make your Apple into a clock-stopwatch...accurate, for experimenters.

**PRICE: \$20.00**

**TITLE: DIET ANALYSIS**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Helps you analyze your diet for carbohydrates, calories, and protein, as well as for 21 vitamins, minerals, and other components, such as saturated fats and fiber. The program produces daily analyses, weekly averages, and monthly comparisons showing three different data breakdowns. It lets you monitor your intake of specific elements, or keep track of your overall diet. It also compares your diet with USDA recommended daily requirements for your age and sex. It allows you to shelve your nutrition charts, calorie tables, and vitamin schedules- and monitor your diet easily and accurately. Automatically analyzes your diet for calories, carbohydrates, protein, cholesterol, saturated fats, unsaturated fats, total fats, fiber, iron, calcium, magnesium, phosphorus, sodium, potassium, folic acid, niacin, panthothenic acid, and vitamins A, B1, B2, B12, C, and E. Doctors may find Diet Analysis useful for quickly evaluating patients' dietary deficiencies.

The food entry procedures are thorough and flexible. You can make your entries at your convenience, once, once a day, or after each meal. You can use the Quick Entry option to set up standard meal menus for some or all of your daily meals. With the Recipe routine, you can input foods which are not in the program's data base.

The See Data routines let you analyze your diet in several different ways. You can study nutritional breakdowns for the past 30 days of data entry, either one day at a time or in groups of consecutive days. The program automatically calculates averages for each 15-day period, and stores the data for your inspection. You can also calculate averages for any time period you

choose, and display up to five averages at once.

A special weight analysis routine calculates your ideal weight on the basis of your height, sex, and frame size. The weight summary will then itemize your changing weight, caloric intake, and level of activity over any time period you choose.

PRICE: \$45.00

**TITLE: DISK-BASED MAILING LIST OF U.S. CONGRESSMEN & SENATORS**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** Now all Congressmen and Senators can be easily reached by mail in one fell swoop! Connecticut Information Systems announces its disk-based mailing-list of 435 U.S. Congressmen and 100 Senators. The disk may be used over and over again to print up a full set of labels. Anyone with political interests can quickly conduct mail campaigns for any purpose! No typing is necessary!

PRICE: \$75.00

\$25.00 peel off sticker

**TITLE: DISKETTE DUPLICATING SERVICE**

**PUBLISHERS NAME: ALLENBACH INDUSTRIES**

**DESCRIPTION:** Allenbach Industries is now offering a floppy disk duplicating service.

To ensure accurate copies every time, we employ a three phase duplicating operation. First, every disks completely electronically surface evaluated before the copy mode. Next, the copies are produced with every disk undergoing a copy verification. Finally, a 10% random check is made on the appropriate computer to confirm the disk readability. By following this procedure, we can confidently ship to you diskettes programmed the way you expect them to be.

Upon receipt of your master disk, we make two copies and send them to you for your approval. We then duplicate the quantity you specify and, with your instructions, either return your master to you or we will keep it for future orders.

Other services offered include:

- 1) application of customers private label
- 2) custom printing of Tyvek disk envelopes
- 3) drop shipping programmed disks to distributors
- 4) copy protection for certain formats
- 5) blank diskettes also available

Our current turn around time is 7-10 days after your approval of the "verification copies." We work on a first come, first served basis, so this turn around time may vary.

PRICE: \$10.00 one-time set up fee

**TITLE: DOCUMENTATION**

**PUBLISHERS NAME: WEBSTER, McFVOY & ASSOCIATES**

**DESCRIPTION:** Webster, McFvoy & Associates is a team of professional technical writing experts. We have years of experience writing and publishing clear, well-organized, easy-to-follow documentation for computer systems.

We have backgrounds in all sorts of data processing applications: banking, insurance, manufacturing, retail, small and large installations.

We are professional communicators. The Webster, McFvoy & Associates's staff is composed of writers, word processing experts, graphic artists, and project managers. We combine our skills to produce manuals and guides that clearly explain your system.

We have the knowledge and equipment to write and publish clear,



easy-to-follow user guides, system descriptions, operator manuals, software product descriptions, or any other data processing documentation.

Webster, McEvoy & Associates' writing team is ready to solve your documentation problem NOW. Wherever you are located. Don't neglect the critical need for clear documentation. Use our team of writing experts. Call our number in San Francisco: (415 956-8289. We'll give you a free assessment of your documentation needs.

**PRICE:**

**TITLE: ELIZA**

**PUBLISHERS NAME: ARTIFICIAL INTELLIGENCE RESEARCH GROUP**

**DESCRIPTION:** Created at MIT in 1966, ELIZA has become the world's most celebrated artificial intelligence demonstration program. ELIZA is a non-directive psychotherapist who analyzes each statement as you type it and then responds with her own comment or question- and her remarks are often startlingly appropriate! Designed to run on a large mainframe, ELIZA has hitherto been unavailable to personal computer users except in greatly stripped down versions lacking the sophistication which made the original program so fascinating.

**PRICE: \$25.00, the complete Source Program for only \$20.00 additional**

**TITLE: FLIGHT SIMULATOR**

**PUBLISHERS NAME: DYNACOMP INC.**

**DESCRIPTION:** A realistic and extensive mathematical simulation of take-off, flight and landing. Utilizes aerodynamic equations and the characteristics of a real airfoil. You can practice instrument approaches and navigation using radials and compass headings. The more advanced flyer can also perform loops, half-rolls and similar aerobatic maneuvers.

**PRICE: \$17.95 cassette**

**\$21.95 disk**

**TITLE: FLIGHT VECTOR**

**PUBLISHERS NAME: STEKETEE EDUCATIONAL SOFTWARE**

**DESCRIPTION:** Here is a complete package, consisting of tutorial and game, to teach students about vectors and the composition (combining) of vectors. The program is divided into two parts: ground instruction and flight tests. The parts can be done in any order. In the ground instruction, the student is given brief descriptions of vectors and how they combine, and is encouraged to experiment with the magnitude and direction of the vectors by using the paddles. Throughout the ground instruction, reading is minimized, and experimentation with vectors and the composition of vectors is maximized.

The flight test part of the program is divided into five different flight tests. In each, the student controls the magnitude and direction of the velocity of an airplane. the object is to fly the plane from one airport to another, taking into account the effect of the wind on the plane's velocity vector. As the student progresses from one test to the next, the pace of the game increases, the wind conditions become more difficult, and the constraints on the route to be followed become more severe. A student who completes all five tests will have an excellent intuitive understanding of how vectors combine. The high-resolution color graphics display includes a display of the airplane velocity vector, a display of the wind velocity vector, a display area where the resultant of these two vectors is constructed, and

a map which shows the progress of the plane.

Originally developed for a science museum, this program is suited for use in a home, school or museum. If the user leaves, even in the middle of a game, the program will return itself to the attract mode, ready to accept a new user.

**PRICE: \$14.95 cassette**

**\$19.95 disk**

**TITLE: LINEAGES**

**PUBLISHERS NAME: QUINSEPT, INC.**

**HARDWARE REQUIREMENTS: printer, clock**

**DESCRIPTION:** Will help you with your genealogy research. With the aid of your Apple, you can always have your most up-to-date information instantly available for display or printout in a variety of useful formats. You may also use Lineages as a working tool in your research, saving notes and a wide variety of historical facts as you find them. The four main programs in Lineages and their capabilities are:

**EDIT** stores the basic family information for each person of interest. You may store names, date and place of birth, data and place of death, current address, occupation, parents, children, marriages, and notes/footnotes. For each marriage you may store spouse, data and place of marriage, and status. The program is very flexible and easy to use, allowing you to add or change information exactly where you want and in the formats most familiar to you. It also saves you considerable work by automatically storing information common to several people, for example marriage date.

**OUTPUT** displays or prints the basic family information stored using **EDIT**. You may print two types of pedigree charts or a chart of descendants, starting from any person you choose. You may display or print all the information stored on any group of people you choose. **OUTPUT** also generates lists of names either alphabetized or in the order you entered them.

**SEARCH** goes through the basic family information you stored using **EDIT** looking for whatever you tell it to. This becomes useful after you have a lot of information stored. The search criteria are very general. Example searches could include everybody living in California between 1910 and 1918, everybody born in March, or everybody who died in Cincinnati. There are a great many more possibilities.

**TEXT** is a "card file" system for storing notes, paragraphs, or pages of information that don't fit into the "basic" categories. Storage and retrieval is by the names you set up using **EDIT**. Each disk used by **TEXT** is independent of every other, giving you an essentially unlimited storage capability. Aids are provided to help manage your disk "collection".

Considerable attention has been given in the design to "user friendliness," meaning many options, ease of use, and escape from mistakes. The design is "menu driven" rather than "question and answer," which lets you control your Apple rather than vice versa.

**PRICE: \$150.00 disk**

**\$ 30.00 manual**

**TITLE: MICRO-ATLAS**

**PUBLISHERS NAME: COLUMBIA SOFTWARE**

**DESCRIPTION:** Micro-Atlas locates, computes exact distances, and determines map bearings between cities in the USA, Canada and Mexico.

The Micro-Atlas data base is a text file containing 411 North American cities whose may coordinates are located to an accuracy

of one mile. Cities can be accessed by their name or by their corresponding three digit number. The disk contains two programs called Locate and Distance. Locate displays the latitude and longitude of cities. Distance determines the straight-line distance and map bearing between any pair of cities found in the data base. Results are plotted on a Hi-Res map of the USA and Canada. Documentation:

A six page instruction manual containing a listing of the entire data base is provided.

Micro-Atlas is better than an ordinary map or atlas:

This easy-to-use disk provides you with location, distance and heading information in just a few key strokes.

Micro-Atlas also helps make travel planning easier. Radio Amateurs can use map bearings to point antennas. Students can improve map reading and geographic skills.

**PRICE: \$24.00**

**TITLE: MORSE CODE SYSTEM**

**PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** Generates Morse Code sight and sound for learning Digits, Alpha, and Special Characters. Demonstrates the use of the DOS EXEC Commands for file control and automatic Apple operation.

**PRICE: \$17.95**

**TITLE: POLITICAL PARTY MAILING LIST**

**PUBLISHERS NAME: COMPUTING CONCEPTS**

**DESCRIPTION:**

- \* Menu driven and prompting throughout
- \* Complete instructions and specifications
- \* Input new names or more corrections
- \* Print out listings alphabetically with phone and address
- \* Screen reviews; all names of individuals
- \* Selections by party I.P. and/or age
- \* Print mailing labels alphabetically (families grouped)

**PRICE: \$100.00**

**TITLE: PRO-PIX '81**

**PUBLISHERS NAME: ADVENTURE INTERNATIONAL**

**DESCRIPTION:** This program tracks the progress of the 28 professional United States football teams during the regular 224 game season. Prediction data has been modified slightly and information is included herein for updating the program for successive seasons.

**PRICE: \$19.95**

**TITLE: SURLIM**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** Flash variable messages on the monitor screen so rapidly that the viewer is influenced on a SUB-conscious level. Subliminal suggestion is very effective in promoting sales, learning, ego strengthening and behavior modification.

**PRICE: \$20.00**

**TITLE: THE COIN COLLECTOR CATALOG**

**PUBLISHERS NAME: ANDENT**

**DESCRIPTION:** A data base program for numismatists (coin collectors). It consists of six programs in which collection

information can be entered, deleted, changed, searched, sorted and printed in multiple formats.

FOREIGN COIN LIST will catalog your collection by denomination, country, mint, condition, description, value, year and source. There are multiple report modes.

DOMESTIC COIN LIST will catalog your collection by denomination, year, mint, condition, description, value and source. There are multiple report modes.

MEETINGS LIST will list, sort and select numismatic meetings by date and location.

SOURCES LIST will list sources for coins, supplies, and information. A useful want list.

DATA BASE create your own data base list. Anything you want, in your won words or titles.

FILE TRANSFER a program that will transfer your data to other disks or over the telephone.

This disk can be copied for back-up purposes. It is user definable and programs can be listed for your own modifications. A detailed manual is included.

PRICE: \$49.00

#### **TITLE: THE FLIGHT PLANNER**

**PUBLISHERS NAME: FLIGHT OPSS**

**HARDWARE REQUIREMENTS: single or dual drive, 80 column printer optional**

**DESCRIPTION:** Makes your Apple computer the ultimate flight planning tool. With the Flight Planner program, your Apple computer will calculate distance, flight times, wind effects, optimum cruise altitudes, direct operating costs, charter trip quotes, payload capacity, reserve fuel range, endurance and even the altitude for maximum reserve range. You simply enter upper winds and airport identifiers.

1. Select Best Economy cruise altitudes and reduce operating costs.
2. Select Best Range cruise altitudes and increase payload or reserves.
3. Select Best Speed cruise altitudes and fly in absolute minimum time.

Many other displays too:

Such as altitude analysis of direct operating costs subdivided by categories. You can also analyze fuel burns and flight times by altitude, each subdivided into climb, cruise, descent and approach segments. Full printout capability for each analysis.

For any flight, any aircraft, to anywhere in the world

Pilots, department managers and dispatchers can all use the Flight Planner. It's easily programmed for one aircraft or an entire fleet; from a C150 to a B747. Completely compensated for climb, descent, approach, temperature and weight.

The Flight Planner program works by using your Flight Manual performance data for climb, cruise and descent segments. it computes your flight using time, fuel and speed performance for each segment of flight. With automatic adjustments for bonus altitude gained by the airport elevation. You can also include an approach time and fuel allowance of your choosing. The computer "flies" this analysis at all possible enroute altitudes and selects the fastest, the most economical and the least fuel altitudes. Using the remaining fuel, a similar reserve analysis also takes place to determine maximum reserve range, endurance and altitude. With the Flight Planner program, you'll always operate at the peak of performance.

To use the program, simply enter your departure and destination airport identifiers, upper winds and aircraft type; the computer does the rest.



The program will work with any aircraft or a whole fleet. Up to 40 aircraft performance data files may be sorted per disk. You program you aircraft's weight, cost, climb, cruise and descent data for selected altitudes. The data is stored on disk, ready for immediate call up. You can also enter multiple files to compensate for weight and temperature variations. (Allow about one hour to completely program The Flight Planner for your aircraft.)

The Flight Planner will work for any airport, anywhere in the world. Longitude/Latitude locations of over 2,000 North American airports are preprogrammed. Should your destination not be on file, just enter the coordinates and it is added to the file. Over 1,000 additional airports may be entered this way.

PRICE: \$450.00

#### **TITLE: THE FOOTBALL COMPU-STAT**

**PUBLISHERS NAME: INTERACTIVE SPORTS SYSTEMS**

#### **DESCRIPTION:**

##### **WHAT IS THE COMPU-STAT?**

The COMPU-STAT is a complete package of computer programs and data that provides graphic and printed pointspread and statistical data to services, media and serious "players". The system does not tout teams, but is capable of analyzing any aspect of football with a minimum of time and a maximum of variety, accuracy and information.

##### **DOES THE COMPUTER PREDICT WINNERS AND SCORES?**

The computer does NOT pick which teams will win games or what the scores will be. However, the system does provide the scientific data analyses YOU need to make your own informed decisions.

##### **WHY USE A COMPUTER?**

The number of teams, the number of games and the amount of data for each game is so great that no one can analyze or manage it all. The computer takes the drudgery out of tracking statistics. You will spend less time gathering information and more time putting it to creative use.

##### **WHY NOT USE A SERVICE?**

The weekly newsletters and magazines provide only a tiny fraction of the interesting statistics and analyses in which a serious player is interested. There are so many possible combinations that it is impossible for all of them to appear in print. You use the computer to calculate and analyze the statistics you need.

##### **HOW AND WHY DID THE COMPU-STAT HAPPEN?**

The COMPU-STAT is the brainchild of a businessman/sports enthusiast who wanted a means to spot trends in football. Thinking that the logical storage place for the statistics that generate these trends would be the home or office computer, he collaborated with two university professors with extensive programming experience, and Compu-Trac, a trading information service with a successful history in the area of commodity and stock market analysis. It is through the combined efforts of these parties that COMPU-STAT is now offered to the public.

##### **WHAT FOOTBALL GAMES DOES THE SYSTEM HANDLE?**

The system handles all 28 professional teams as well as all major college conferences. Special historical statistics and analyses are available for Monday night games and pro football playoff games.

##### **CAN THE COMPUTER TELL ME HOW I DID?**

The computer keeps track of your predictions and the results. You can log and compare how well you fared against an individual or groups of people. Our TALLY SHEET program will

immediately compute the results of your predictions and give you a breakdown showing how you have done, with whom and, in addition, a summary sheet listing how you have done with respect to each of the other "players" currently on the system.

#### EXACTLY HOW DOES THE COMPU-STAT WORK?

In computer jargon, COMPU-STAT is a "user-friendly" system. On the computer's screen, you will be offered a "menu" of possible choices. By pressing a button the computer can give you-

- \* a weekly schedule for all teams.
- \* a full-season schedule for a particular team.
- \* an analysis of game statistics, pointspread history and win-loss record of any team.
- \* an analysis of summary statistics and averages for divisions, conferences and league as a whole.
- \* a game analysis comparing the statistics and records of any two teams so that you can "match them up".
- \* a TALLY SHEET which keeps track of your past predictions and results.

#### WHAT DATA IS AVAILABLE?

Complete data is available for every game in the 1981 pro football regular season. Additionally, there is a weekly data update available for the 1982 season, which keeps your files current and accurate. For now, college data will have to be updated by the user. You can, of course, maintain your own data on pro football as well.

#### HOW CAN I GET IT?

The COMPU-STAT is now available for the APPLE. Inquire at your local computer dealer or consult our office in New Orleans.

PRICE:	Pro Football Analysis.....	\$150.00
	Pro Football Playoff Analysis.....	\$150.00
Monday Night History, Stats & Analysis.....		\$100.00
College Football Conference Analysis.....		\$100.00
Betting Accounts/Tally Sheet.....		\$100.00
VisiCalc Output Formatter.....		\$100.00
DATA SERVICE (does not include shipping)		
	1981 Pro Football Game Data.....	\$100.00
	1982 Pro Football Weekly Data Updates.....	25/week
1982 Pro Football Season		
	Subscription Service.....	\$250.00
COMPLETE SYSTEM (includes all of the above programs and data services along with an Apple II + computer).....		\$3500.00

#### TITLE: THE STAMP COLLECTOR

#### PUBLISHERS NAME: ANDENT

#### HARDWARE REQUIREMENTS: firmware/language card, optional printer

DESCRIPTION: A data base program for philatelists (stamp collectors). It consists of six program in which collection information can be entered, deleted, changed, searched, sorted and printed in multiple formats.

FOREIGN STAMP LIST will catalog your collection by denomination, country, description, year, value, source, etc. There are multiple report modes.

DOMESTIC will catalog your collection by denomination, year, description, value, source, etc. There are multiple report modes.

MEETING LIST will list sources for coins, supplies and information on trades and liquidations. A useful want list.

DATA BASE create your own Data Base list. Anything you want, in your own words or titles.

**FILE TRANSFER** a program that will transfer your data to other disks or over the telephone. This disk can be copied for back-up purposes. It is user definable and programs can be listed for your own modifications. A detailed manual is included.  
**PRICE: \$49.00**

**TITLE: THE STAR GAZER'S GUIDE**

**PUBLISHERS NAME: SYNERGISTIC SOFTWARE**

**DESCRIPTION:** The Star Gazer's Guide puts the universe at your fingertips, letting you display at will the entire summer or winter sky of the northern hemisphere, or any section thereof, in great detail. The programs are oriented toward teaching painlessly the locations and names of the major constellations. Features include:

- \* All major constellations are displayed in detail with or without outlines to identify stars and objects composing the star groupings. Both the Latin and English names are provided with the description.
- \* Both geometrical and graphical type outlines are provided. The commonly used geometrical outlines identify the key stars of the constellation. The alternative graphical outlines more clearly demonstrate the figure the constellation name suggests.
- \* Major galaxies, nebulae, clusters, double stars, etc. are pinpointed by a special symbol for quick identification. Separate programs provide additional information about the nature of these subjects.
- \* Brightest stars are identified by name and location in each constellation.
- \* The touch of a key presents text describing the objects displayed.
- \* Objects and constellations are identified by general sky orientation so no special equipment or training is required, but program documentation provides spatial coordinates for those interested.
- \* Menu Driven, single keystroke commands allow rapid access to any of the 50 general purpose or detailed programs.
- \* Informative document provides additional details about the constellations, stars, Messier objects, astronomy terminology and concepts, etc. The document is conveniently separated between the requirements of the casual user and those desiring in-depth information.

**PRICE: \$30.00**

**TITLE: THE STRAIGHT LINE**

**PUBLISHERS NAME: FLIGHT OPSS**

**DESCRIPTION:** Also known as the Great Circle Route. Now you can fly Great Circle routes using only VOR RNAV equipment. Available as part of The Flight Planner program and as an upgrade for present Flight Planner owners.

Fly all or part of your trip on the Great Circle route. You can also flight plan entirely between VOR's too. Fly part of your trip along VOR's and the remainder Great Circle. Any combination is possible. You just enter the routing of your choice.

Full printout capability allows you to easily take the computed data along with you. Printed out in an organized form, with headings, times, fuel consumption and distances between each way point. Even blanks for "how-goes-it" entries along the way.

**PRICE:**

**TITLE: THE WORD PROCESSOR****PUBLISHERS NAME: BIBLE RESEARCH SYSTEMS**

**DESCRIPTION:** We have just introduced an important and innovative Bible study aid. The product is called THE WORD processor and is a computerized version of the Bible available on personal computer. The features of this product are described below:

The ability to locate all verses that contain any specific words or phrases that you specify. Better than a concordance, THE WORD processor can find any phrase or string of characters.

The ability to do word or phrase frequency analysis when analyzing a particular portion of the Bible. This can lend valuable assistance to studies of writing styles and authorship.

The ability to permanently retain the results of each study you do on any topic and the ability to refer back to previous studies for cross-reference or comparison. For example, if you study the topic REDEMPTION you may request THE WORD processor to create an index that includes all verse references you use during that topical study. Later when you are studying THE SECOND COMING OF CHRIST, you may request THE WORD processor to find all verses common to both topics. These indexes become permanent additions to your study library. Your personal library of indexes will grow as you invest hours in Bible study. Indexes can be combined for study of their similarities or variations and they can be modified or expanded as your knowledge grows.

The ability to transfer any portion of the text to the printer for taking notes or sharing with others.

The ability to display any Bible text and to scroll through the text at your own pace. You may page through the text for general reading or select any verse of your choice to be displayed next. You may move forward, backwards or randomly through the Bible text.

The ability to group all verses common to one concept together. Using the printing capability of THE WORD processor, all verses common to the topic of your study can be printed together, significantly simplifying study of that topic or sharing those verses with others.

These and many other benefits allow the user to search the Scriptures more easily and more exhaustively. THE WORD processor applies computer technology for the analysis of the Bible in a form which is economically feasible for use by Bible students at home.

**PRICE: \$159.95**



## TIME SHARING

ABT VT-100 TERMINAL EMULATOR . . . . .	TS-1
COMM-PAC . . . . .	TS-1
COMP*U*STAR . . . . .	TS-1
DOW JONES NEWS/RETRIEVAL . . . . .	TS-2
MICRONET . . . . .	TS-4
NESTAR CLUSTER/ONE MODEL A . . . . .	TS-4
ONE MEGABAUD NETWORK . . . . .	TS-5
THE KUSSMAUL ENCYCLOPEDIA . . . . .	TS-5
THE KUSSMAUL ENCYCLOPEDIA/SYSTEM DC . . . . .	TS-6
THE SOURCE . . . . .	TS-6

**TITLE: ABT VT-100 TERMINAL EMULATOR****PUBLISHERS NAME: ADVANCED BUSINESS TECHNOLOGY, INC.****HARDWARE REQUIREMENTS: Apple Communications Card, Novation Cat Modem.**

**DESCRIPTION:** Now Apple II can directly utilize the limitless computing capacity of local, national, even international time shared computing systems. The ABT VT-100 enables dial-up access to any established RSTS/E operating system or data base. All significant features of the DEC RT-100 (including VT-52), are performed by the user's Apple system. Local work files can be obtained from or sent to a network. Your Apple can be your office with the ABT RT-100.

**TYPICAL USES:****Accounting:** Remote Database Access, Budgets, Projections.**Industrial Scientific:** Intensive Computation.**Educational:** System Simulation.**Personal/Home:** Access Office Computer.**PRICE:****TITLE: COMM-PAC****PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** Comm-Pac is a data communications program that enables an Apple II to communicate with other computers, timesharing systems, networks, newswires, and other subscription services. Its special features, such as auto-dial, auto-log on, and file transfer, make it easy, efficient, and economical to use.

**PRICE: \$85.00****TITLE: COMP\*U\*STAR****PUBLISHERS NAME: COMP-U-CARD OF AMERICA, INC.**

**DESCRIPTION:** Comp\*U\*Star is the complete shop at home system available to home computer users. As a member of Comp\*U\*Star, you may access information on product features, model numbers, descriptive information, and price quotations, and you may order, at substantial discounts, any of the 30,000 plus brand name products.

Only Comp\*U\*Star has all this:

**1. More than 30,000 products**

Appliances, Cameras, Crystal, China, Electronics, Musical Instruments, Stereo, Sterling, Televisions, Video Equipment, Watches, and more. New products are added daily.

**2. Over 100 Top Quality Brands**

Admiral, Baldwin, Bulova, Canon, GE, KitchenAid, Kodak, Lennox, Maytag, Minolta, Nikon, Omega, Panasonic, Pioneer, Polaroid, RCA, Sanyo, Seiko, Smith Corona, Sony, Technics, Westinghouse, Whirlpool, and Zenith- to name just a few.

**3. Full Guarantees**

All products are sold in factory sealed cartons with full manufacturer guarantees and warranties in effect.

**4. Tremendous Savings**

Items are sold at discounts ranging from 10-40% off manufacturer's suggested list price.

**5. Easy to Use**

Anyone can learn how to use Comp\*U\*Star! It's simple and requires no special knowledge of computers.

**6. Bargains**

Comp\*U\*Star offers limited time only specials from the national marketplace. Comp-U-Bargains offer exceptional savings over our already low prices.

**7. Convenience**

24 hour shop at home convenience. Your terminal and Comp\*U\*Star

do all the work. Save time and gas. Purchases can be charged on most major credit cards, or pay by check.

#### 8. Home Delivery

All products delivered directly to your door.

#### 9. Comparison Shopping

You can get product and price information on every product in the database. Compare and choose the best product for you- all information is current with daily updates.

#### 10. Gift-Buying

Use Comp\*U\*Star to buy gifts for friends and relatives, and have gifts shipped directly to them at no extra cost.

#### 11. Satisfaction Guaranteed

Your membership fee is fully refundable if you are not completely satisfied. (You are, however, responsible for connect time charges.)

### Shopping on Comp\*U\*Star

Comp\*U\*Star is simple to use. You can get information on a specific model, or go shopping to see which of our 30,000 products meet your needs. For example, if you want to buy a 19" remote control color TV, costing no more than \$500 delivered, Comp\*U\*Star would respond with 17 different models. Once you have found the product you want, you can place your order and your purchase will be delivered to your home.

#### How to Join

Simply fill out a Comp\*U\*Star application with your name, address and charge card information, detach, seal it, and mail it to us (no postage needed). We will send you your membership kit, user's manual, personal membership number, and pass-word. If you have any questions, call us at 800-243-9000

#### Paying for Comp\*U\*Star

Your annual membership fee and connect time charges for use of the system will be conveniently charged to your credit card.

#### Connect Time Charges

\$.50/minute 9am-5pm, Monday to Friday, Eastern Time

\$.25/minute All other time

#### How to Access Comp\*U\*Star

Comp\*U\*Star is available over a nationwide data communications network. You dial up the Comp\*U\*Star phone number closest to your home, hook up your terminal and you're ready to go.

Comp\*U\*Star works with virtually any terminal and 300 baud modem. (You need a data terminal or personal computer capable of data communications- serial, asynchronous, ASCII.) Check with your local dealer if you have any questions.

**PRICE: \$25.00 for a 1 Year Membership, plus 2 free months.**

**\$40.00 for a 2 Year Membership, plus 2 free months.**

**TITLE: DOW JONES NEWS/RETRIEVAL**

**PUBLISHERS NAME: DOW JONES**

**DESCRIPTION: News**

- \* In over 80 News categories
- \* On over 6,000 companies and over 50 industries
- \* Also includes over 700 Canadian companies
- \* From The Wall Street Journal, Barron's, and the Dow Jones News Service
- \* Search through headlines and retrieve stories as recent as 90 seconds, as far back as 90 days

**Free Text Search (of News data base)**

- \* Search using any combination of words, dates, or numbers back to June, 1979.
- \* A powerful way to find specific data on any subject.

### Media General Financial Services

- \* Detailed Corporate financial information on over 3,200 companies and 180 industries
- \* Includes 52 statistical indicators
- \* Some major categories include:

Revenue	Volume	Price changes
Earnings	Ratios	Relative price
Dividends	Shareholdings	

### Weekly Economic Update

- \* A single resource for all the economic news you need
- \* A review of the past week's top economic events and a glimpse of the month ahead

### Wall Street Week Online

- \* Online transcripts from the popular PBS television program, Wall Street Week.
- \* Four most recent programs available at any one time

### Weather Report

- \* Weather Tables for over 50 major cities
- \* National Weather Summary & Forecast by geographic regions

### Sports Report

- \* Scores, Stats, Standings, Stories, and Schedules for most Major Sports
- \* Professional, Major College, and Top Amateur

### Cinema Movie Reviews

- \* Provides up-to-date movie reviews that are interesting, informative and concise
- \* New Releases, Current Movies and Coming Attractions
- \* Includes interest ratings

### Current Quotes (Minimum 15-minute delay during market hours)

- \* Common & Preferred Stocks and Warranty
- \* Corporate & Foreign Bonds
- \* Mutual Funds
- \* U.S. Treasury Issues
- \* Options

### Historical Quotes

- \* For the last 24 trading days
- \* Monthly summaries back to 1970
- \* Quarterly summaries back to 1970

### Money Market Services

- \* Weekly economic survey from 40-50 of the nation's top financial institutions
- \* Includes:
  - Commentary and Analysis
  - Median Forecasts of Monetary And Economic Indicators
  - Bar Charts Illustrating the Distribution of Forecasts

### DISCLOSURE II

- \* 10-K Extracts, Company Profiles, and Other Detailed Data On Over 6,000 Publicly-Held Companies. From the U.S. Securities and Exchange Commission (S.E.C.).

### Corporate Earnings Estimator

- \* Consensus earnings forecasts for 2,400 of the most widely-followed companies
- \* Compiled by Zacks Investment Research, Inc. from the research of some 1,000 analysts at 45 major brokerage firms



## Wall Street Journal Highlights Online

- \* An electronically-delivered summary of The Wall Street Journal
- \* Provides online headlines and summaries of major stories as early as 7am (Eastern Time)
- \* Includes front page news items, front and back page features, market pages, and editorial columns and commentary

## Master Menu

- \* A Complete Online Listing of the Information Contained in Our Service Along With Detailed Instructions on How to Access Each Data Base.

## PRICE:

## TITLE: MICRONET

### PUBLISHERS NAME: COMPUERVE

### DESCRIPTION: WHAT IS MICRONET?

It is the personal computing service of CompuServe, Incorporated. CompuServe is a nationwide commercial time sharing computer network with large-scale mainframes. MicroNET allows the personal computer user access to CompuServe's large computers, software and disc storage during off-peak hours (from 6 PM to 5 AM weekdays, all day on Saturdays, Sundays and most holidays).

### WHAT DO I GET?

You can use our powerful processors with X-Basic, Fortran, Pascal, Macro-10, AID or APL. You get 128K bytes of storage free (just access it at least once a month). Software includes games - including networking multi-player games - personal, business and educational programs.

In addition, there is the MicroNET National Bulletin Board for community affairs, for sale and wanted notices and the MicroNET Electronic Mail System for personal messages to other MicroNET users. You can even sell software via MicroNET.

You can switch between terminal and local mode while on line.

### WHAT DO I HAVE TO HAVE TO USE MICRONET?

The standard 300 baud modem. MicroNET has local phone service in most major cities (see below) and a reduced phone charge in over a hundred others.

### WHAT IS THE COST?

There is a one-time hook-up charge of only \$9.00! Operating time-billed in minutes to your VISA or MasterCard card-only \$5.00 an hour.

## PRICE:

## TITLE: NESTAR CLUSTER/ONE MODEL A

### PUBLISHERS NAME: NESTAR

DESCRIPTION: Model A is for the Nestar network that uses as few as two or as many as 65 standard Apple computers; one becomes a central processor; the other, interacting stations up to 1,000 feet away...Each station connects to a central storage system capable of storing up to 33 million bytes on a single hard disk. A network that allows the user to execute programs in either the Apple Disk Operating System or the Apple Pascal System environment. And the programs, files and data for either system reside in the central unit.

Information can be transmitted from machine directly without going through disk files and without the need for modems. All stations share access either to private data or to a common read only library of programs and data. All stations can update data bases simultaneously.

Other user written applications may include:

-classic central data base systems

- inventory control
- accounting procedures
- legal brief storage and reference
- mailing list management
- medical patient information records
- word processing with complete editing capability
- electronic mail systems
- inter office memo systems
- multi user interactive simulations
- financial planning systems
- data acquisition
- educational applications

The Model A consists of a compact metal box with two double sided 8 inch floppy disks with formatted available storage of 1,260,000 bytes; the necessary electronics which plug into the central controller Apple; the ClusterBus communication card; the communication card; the communication cards required for each Apple station, and all necessary software. Also available as an option is the Nestar hard disk drive with either 16.5 or 33 million bytes of formatted available storage in a single unit.

The user station communication cards contain 2KB or ROM, 1KB of RAM and all necessary bus electronics. They are compatible with standard Apple interface cards including those for mini disks, serial and parallel printers, modems, sound, and graphics tablets. The ClusterBus communication card plugs into any of the peripheral connectors inside the Apple and is perceived by the Apple to be an Apple mini disk controller and thus will be automatically initialized when the Apple is turned on.

**PRICE:**

**TITLE: ONE MEGABAUD NETWORK**

**PUBLISHERS NAME: CORVUS SYSTEMS**

**DESCRIPTION:** Offers microcomputer user the power and versatility of mainframe network systems costing thousands of dollars. Omninet is a one megabaud network utilizing low cost, shielded twisted pair cable in lieu of more costly and bulky coaxial cable. The network allows the interconnection of up to 64 microcomputers and peripherals in a 4,000 foot serial link. The intelligence of the system is centered around the Omninet transporter which is an interface consisting of a Motorola 6801 microprocessor, custom circuitry and associated support components. The transporter interfaces directly to a microcomputer or peripheral on any network mode and provides the transfer of error free, variable length messages with no software intervention. The twisted pair data link also offers low cost and ease of installation.

**PRICE: \$495.00**

**TITLE: THE KUSSMAUL ENCYCLOPEDIA**

**PUBLISHERS NAME: GENERAL VIDROTEX CORP.**

**DESCRIPTION:** An entirely new kind of reference work. It's actually a computer system complete with everything you need to:

- Look up any subject from ancient Babylonia to the latest technologies with automated cross referencing and searching.
- Look up today's new, weather, and sports.
- Retrieve current prices of stocks, bonds and commodities.
- Read articles from the Washington Post, Wall Street Journal and other publications before they've been printed.
- Communicate with other users interactively.
- Send Mailgram messages for delivery by the US Postal Service the next day at any address in the United States.
- Access any of the many online community bulletin boards in your

area.

-Shop for appliances, records and other merchandise from your home.

Or, you can disconnect your computer from the telephone and use it to:

-Learn computer programming using the widely accepted BASIC language.

-Run the programs provided with the system to manage household finances, develop learning skills in children, play space wars and other exciting games.

**PRICE:**

**TITLE: THE KUSSMAUL ENCYCLOPEDIA/SYSTEM DC**

**PUBLISHERS NAME: GENERAL VIDEOTEX CORP.**

**DESCRIPTION:** For those who need to take advantage of the powerful data acquisition, analysis, modeling and forecasting capabilities of the Apple Computer, we offer the Kussmaul Encyclopedia/System DC, which includes:

-The Apple II Plus Computer with 48K of memory

-Encyclopedia data base account

-Disk II 5-1/4" disk drive

-Hayes Micromodem II

-Sup R Mod RF (UHF) Modulator

-"Terminal" terminal emulator program

-Dow Jones News and Quotes Reporter

-Dow Jones Portfolio Evaluator

-CompuServe Information Service

-CompuStar comparison shopping and merchandise ordering service.

Price includes training on the operation of the computer by an Apple specialist at our facility. For the Apple system we offer a variety of options including additional disk drives, VisiCalc, and others. Please call for details.

**PRICE: \$2750.00**

**TITLE: THE SOURCE**

**PUBLISHERS NAME: THE SOURCE TELECOMPUTING CORP.**

**DESCRIPTION:** Now, many of the services provided by individual specialists can be at your fingertips with a remarkable information and communication service called the Source.

With The Source, you can stay on top of world news and sports as they happen. You can oversee stock prices and market reports, and make travel and hotel reservations at a moment's notice. You can find information from hundreds of sources, get valuable household tips for saving money, send mail instantly across the country to other subscribers of The Source, get educational programs and electronic games for your children, and manage your finances more efficiently at the office and at home.

The Source offers over 1200 programs and services right now and new ones are being added continuously. You also have access to Source\*Plus, and advanced level of in depth information available with several select services on The Source.

The Source can be accessed with almost any microcomputer, terminal or word processor with a minimum of additional equipment.

To get online, you simply make a local call in over 350 cities. The Source will then ask for your number and confidential password, assuring that your files and transactions are secure.

That's all it takes. You'll be ready to access any of the more than 1200 programs and services available just by typing in your commands in plain English. You pay one time subscription fee of only \$100.00 and you can use The Source for as little as \$4.25 an hour.



The Source is so versatile, you can use it effectively whether you are a computer expert or just a beginner. You can develop your own programs on the simplest levels or you can use our advanced programming support.

The Source can save you time and money in running your business. It not only puts in depth information at your fingertips, but it helps you find the facts you need quickly and easily. It also gives you a fast, economical method of communicating electronically with branch offices and field representatives subscribing to The Source.

Many of the business oriented services on The Source are equally as valuable for home use, but in addition to these services, The Source also includes hundreds of categories especially designed to educate, entertain and inform every member of the family.

The following is just a sample of what The Source has to offer:

- UPI News Services
- Electronic Mail
- Electronic Travel Service
- The New York Times Consumer Library
- Educational Programs
- Consumer Aids
- Electronic Games
- General Entertainment

#### SOURCE\*PLUS

An advanced series of data bases offering an even more in depth level of information. When accessing the Source\*Plus feature on these services, usage fees will be slightly higher and will be structured according to the information used.

-Management Contents, LTD.

(An Executive Reading Service.)

Find articles of special interest to your business from the latest issues of 27 of the best business journals. Titles of articles and a brief description are included. With Source\*Plus, you can get keyword search of abstracts by title, author and subject matter. You may also order reprints of articles, at an additional cost.

-Media General Financial Service

Provides 58 current and historical items of data for over 3,100 stocks in such areas as share price, trading volume, accounting ratios, corporate earnings, shareholders, etc. Information is grouped into 12 logical categories presented as screens. Whole portfolios of stocks can be compared, ranked, and evaluated simultaneously.

-Legi-Slate

(Monitors Congressional Activity)

Legislation affects everyone's business. This service keeps you up to date. It lists all members of Congress, party affiliations, committee assignments and ratings of members of Congress by public interest groups. Lets you track bills referred out of Congressional Committees, gives you keyword search capability and lets you order copies of bills.

-Commodity News Services, Inc.

Tracks price movements in commodities futures markets and provides market commentary as well as commodity news with frequent updates while the market is trading.

-Comp\*U\*Star

An electronic department store. It lets you shop at home and order from over 30,000 brand name items. You can comparison shop by product, manufacturer, model number, product characteristics as well as a preferred price range.

**PRICE:**



# WORD PROCESSING

APPEN 1 TEXT EDITOR . . . . .	WP-1
APPLE II TEXTWRITER . . . . .	WP-1
APPLE TEXT PROCESSOR/APPLE SIMON/PAPER TIGER GRAPHICS . . . . .	WP-1
APPLE WRITER . . . . .	WP-2
APPLE-SCRIBE-2 . . . . .	WP-3
AUTHORING SYSTEM FOR TRAINERS AND EDUCATORS . . . . .	WP-3
CAVECORD: THE PROFESSIONAL INFORMATION MANAGER . . . . .	WP-4
CAVRIDEX . . . . .	WP-4
DISK APPLE II REPORT TEXT WRITER - DART . . . . .	WP-4
DR. MEMORY . . . . .	WP-4
EASYFILER . . . . .	WP-5
EASYSPELLER . . . . .	WP-5
EASYWRITER ORIGINAL . . . . .	WP-6
EASYWRITER PROFESSIONAL . . . . .	WP-6
EDITRIX . . . . .	WP-7
ELECTRONIC SECRETARY . . . . .	WP-7
FORM LETTER . . . . .	WP-7
FORM LETTER MODULE . . . . .	WP-7
FORMAT II . . . . .	WP-7
FORMAT ROM . . . . .	WP-8
GHOSTWRITER (TM) . . . . .	WP-9
GOODSPELL . . . . .	WP-9
HAM COMMUNICATIONS PACKAGE . . . . .	WP-10
KEY PERFECT . . . . .	WP-10
LETTER MASTER . . . . .	WP-10
LETTER PERFECT . . . . .	WP-10
LETTER PROCESSOR . . . . .	WP-11
LETTERITE . . . . .	WP-11
LEXICOM . . . . .	WP-11
MAGIC WINDOW . . . . .	WP-11
MAGIC WINDOW II . . . . .	WP-12
MAGIC WORDS . . . . .	WP-13
MIGHTY MITE (WORD PROCESSOR) . . . . .	WP-13
MULTI-MESSAGE WITH INTERLEAVED COLOR PATTERNS . . . . .	WP-13
PAGE PROCESSOR . . . . .	WP-14
PERSONAL TEXT PROCESSOR . . . . .	WP-14
PIE WRITER . . . . .	WP-14
PIG PEN . . . . .	WP-15
PRINTER TYPER . . . . .	WP-15
QUICKWRITER . . . . .	WP-15
REPORT WRITER . . . . .	WP-15
SCREEN WRITER . . . . .	WP-16
SELECT . . . . .	WP-17
SUPER MESSAGE . . . . .	WP-18
SUPER TEXT . . . . .	WP-18
SUPER-TEXT 40/56/70 . . . . .	WP-18
SUPER-TEXT ADD-ON MODULES . . . . .	WP-19
SUPER-TEXT II . . . . .	WP-19
SUPERSCRIBE II . . . . .	WP-20
TEXT EDITOR . . . . .	WP-20
TEXT EDITOR I . . . . .	WP-21
TEXT FILE EDITOR . . . . .	WP-21
TEXT POWER . . . . .	WP-21
THE APPLE SPELLER . . . . .	WP-21
THE CORRESPONDENT . . . . .	WP-22
THE DATACOPE SCRIBE . . . . .	WP-22
THE DICTIONARY . . . . .	WP-23
THE EXECUTIVE SECRETARY . . . . .	WP-24
THE EXECUTIVE SPELLER . . . . .	WP-25
THE GENERAL MANAGER . . . . .	WP-26
THE PERSONAL SECRETARY . . . . .	WP-26
THE PROMPT-DOC . . . . .	WP-26

THE SENSIBLE SPELLER FACTS . . . . .	WP-27
THE WORD HANDLER . . . . .	WP-28
THE WORD PLUS . . . . .	WP-29
TXT/ED 2.0 (WORD PROCESSOR) . . . . .	WP-29
VARIABLE MESSAGE . . . . .	WP-29
WORD POWER . . . . .	WP-29
WORD PROCESSING . . . . .	WP-30
WORD PROCESSING PROGRAM . . . . .	WP-30
WORD PROCESSOR . . . . .	WP-30
WORD PROCESSOR . . . . .	WP-30
WORD PROCESSOR II . . . . .	WP-30
WORDPOWER . . . . .	WP-31
ZARDAX - THE APPLE II WORD PROCESSOR . . . . .	WP-31

**TITLE: APPEN 1 TEXT EDITOR****PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** A real text editor for cassette based Apple II computers. Insert, delete or change lines of text in the computer's memory. A 'FIND' command will locate all occurrences of a specified text string. Save your text on tape and recall it later or merge it with another file. 1001 uses in the home - menus, birthdates, addresses, and phone numbers, appointments, etc. Easily links to your printer. Complete with easy-to-understand user's guide.

**PRICE: \$17.95 Tape****TITLE: APPLE II TEXTWRITER****PUBLISHERS NAME: SERVICES UNIQUE, INC.**

**DESCRIPTION:** Services Unique, Inc. announced the Disk Apple II Report Text writer (Dart) software for the Apple II and Apple II Plus computers. Dart processing software was designed to simplify the creation of letters, reports and other output text utilizing disk files created by Edit.

This text composition system allows free form file input without regard to either line or page length. Dart assembles text into physical lines and pages using predefined operator or file parameters. A special feature allows variable data to be key entered at report generation time utilizing standard text or form letter. File chaining allows an unlimited amount of input text. Other options include pagination, line justification, titles-subtitles, page numbering, line centering, margin setting, and double spacing.

Dart operates on an Apple II or Apple II Plus with a minimum of 32K memory, one disk unit and a printer. The textwriter supports a variety of printers including disk unit and a printer. The textwriter supports a variety of printers including lower case as well as a CRT review. Optional lower case display is available with the appropriate adaptor.

A user manual with documentation is provided.

**PRICE: \$19.95 Diskette, plus \$1.25 shipping****\$37.89 Special package price for Dart and the text editor****TITLE: APPLE TEXT PROCESSOR/APPLE SIMON/PAPER TIGER GRAPHICS****PUBLISHERS NAME:**

**DESCRIPTION:** (Text Outputter, Updater, and Generalized Handler) transforms your Apple into a line-oriented Text Processor. Upper and Lower case, right-margin justification, tab/indent, variable line lengths, and horizontal page centering of text are allowed. The editing features are as follows: Review text (all text or selected lines); Retype line(s); Insert Line (s); Erase Line(s); and Print Text. Printer Options include: Auto-page Numbering; Center Text single/double line spacing; Print Line #'s; Print Density; and both serial and parallel versions are provided. Text can be automatically saved and recalled from disk.

**Apple Simon**

A low resolution graphics version of the popular electronics game. Your coordination and memory tested with combined color and sound.

**Paper Tiger Graphics**

An Applesoft and Assembly Language program for printing the High Resolution page 1 Graphics Screen to IDS 440 Paper Tiger Printer (when the 440 is equipped with the Graphics Option). Black-on-White or White-on-Black (inverse) printing of the Screen Image are allowed.

**PRICE: \$24.95**

**TITLE: APPLE WRITER****PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** The Apple Writer program turns your Apple Computer System into a sophisticated text editor - providing you with the capability to write, revise, edit, and print all types of documents quickly and inexpensively. You can easily perform every editing task, from correcting typographical errors to moving whole paragraphs. And you can precisely format and print your text letter-perfect every time.

Apple Writer...saves time often spent modifying, moving, and formatting text, with its extensive editing and printing commands corrections can be made character-by-character, so there's no need to retype an entire line when only minor changes are required...is easy to learn and operate with its simplified command structure...saves paper costs and filing space with floppy diskette storage...reduces paperwork costs with its powerful editing capabilities...allows you to write in any order you choose, so text can be stored in sections and later combined in any order for printing...protects files from accidental loss through its program/system recovery and audible prompt features. The Apple Writer program diskette contains a Tutorial text file which you can view on your screen. It introduces you to some of the features of the Apple Writer editor, so that you'll feel more comfortable using the program for the first time. Just follow the simple instructions in the Apple Writer program manual to access the Tutorial.

The Apple Writer program is ready to use when the "Editor Menu" is displayed on your monitor or television screen.

By selecting INITIALIZE NEW FILE, for example, and pressing the "return" key, you may begin a new document. Simply enter your text on the Apple's Keyboard, and it will be displayed simultaneously on your screen. Although only upper case letters will appear, Apple Writer will automatically translate them into lower case during printing. To capitalize a letter or word, use the "ESC" key; capitals will appear as inverse video on your screen and upper case when printed.

With Apple Writer, pressing the "return" key is necessary only at the end of paragraphs. Apple Writer will automatically insert all other "returns" during printing. You can type continuously - and faster - since there's no need to strike the "return" key at the end of every line.

If you want to add a new word or sentence in the middle of a paragraph, move the cursor to the location and begin typing. To remove a word or sentence, simply delete the undesired text by positioning the cursor after the data and backspacing.

Apple Writer also provides a powerful automatic or manual "search and replace" feature. If you've misspelled a word throughout the text, for example, enter the misspelled word and its correct spelling. Then type two simple commands, and Apple Writer will change every misspelling of the word instantly. If you've overused a word and wish to change it only in specific locations, enter the word and an appropriate synonym. Apple Writer will lead you through the text, stopping at each occurrence of the word. You can then specify where you wish each substitution to be made.

To format text, just type of the four commands that center, left-right-, or fill-justify lines during printing.

With your Apple Computer System connected to a compatible printer, Apple Writer will print you finished documents automatically.

The Apple Writer "Print Menu" will be displayed after you have selected PRINT FILE from your Editor Menu.

To print you document, select PRINT NEW DOCUMENT and press the



"Return" key. Apple Writer will then display a listing of printer parameters.

Specify desired line spacing, number of lines per page, page numbering, and margins. Then press the "return" key once more. Apple Writer will print your document exactly as you've specified.

With Apple Writer, a first draft can be the final copy - every time.

To use the Apple Writer program, you will need the following system:

Apple II or Apple II plus, each with 48K of memory;

Apple Disk II with controller;

A video monitor or television;

A compatible printer\*;

A printer controller card\*;

\*Note: The apple Computer System works with several printers and appropriate controller cards, including those specified below:

Apple Silentype Printer Card: Silentype Interface Card (supplied with printer)

Centronics 779 Card: Centronics Printer Interface Card (Apple Product A2P0007, included if printer is purchased from Apple Computer Co.)

Printronic Card: Parallel Interface Card (Apple Product A2P0002)

Qume Sprint 5, Diablo Hyterm, and NEC Sprinwriter 5510R Card:

High Speed Serial Interface Card (Apple Product A2P0005) with PR-02 PROM.

With Your Apple Writer order, you will receive: Two (2) Write-Protected Apple

Writer Diskettes, Two (2) Non-Write Protected Apple Writer Diskettes, Apple Writer Instruction Manual.

**PRICE:**

#### **TITLE: APPLE-SCRIBE-2**

**PUBLISHERS NAME: PYGMY PROGRAMMING**

**DESCRIPTION:** Apple-Scribe-2 is a non-line oriented text editor. It can be used from either tape or disk, without any modifications to the computer.

Some of the features of Apple-Scribe-2 are:

- \* Complete curser control
- \* High-speed search with universal or individual replacement
- \* Block move/delete
- \* Right-hand justified print
- \* Selectable margins, line spacing and indent (defined as flag characters in the text)
- \* Automatic page numbering and headings
- \* Upper/lower case letters (displayed as inverses)

Apple-Scribe-2 occupies approximately 9K of memory, plus 2K already reserved by the Apple. It stores text in a one byte per character form, making the best use of available memory space.

**PRICE: \$59.95**

#### **TITLE: AUTHORING SYSTEM FOR TRAINERS AND EDUCATORS**

**PUBLISHERS NAME: CAVRI SYSTEMS**

**HARDWARE REQUIREMENTS:** two disk drives, selected VCR, color monitor with audio

**DESCRIPTION:** Permits an author with no knowledge of programming to write interactive video programs using an Apple computer, a VCR, and the CAVRI hardware. The prompt driven system offers straightforward modules for writing pages of computer text and graphics as well as for integrating video segments, branching to video or text, providing hints, scoring, and carrying out CMI (record keeping).

**PRICE: \$995.00**

**TITLE: CAVECOR: THE PROFESSIONAL INFORMATION MANAGER**

**PUBLISHERS NAME: CAVRI SYSTEMS**

**HARDWARE REQUIREMENTS: selected VCR and color monitor with audio**

**DESCRIPTION:** An interactive video authoring program addresses to professional and management level users. Also useful for medical or quality control studies. The user always has complete control from the Apple keyboard over what material is displayed and may, at any time, branch ahead or back on tape or text. A routine to display a table of contents of the video material as well as a means of recording and storing observations about the video material are provided.

**PRICE: \$495.00**

**TITLE: CAVRIDEX**

**PUBLISHERS NAME: CAVRI SYSTEMS**

**HARDWARE REQUIREMENTS: selected VCR and color monitor with audio.**

**DESCRIPTION:** A hardware/software package that provides a computer based method to catalog and retrieve videotaped and text material.

The user stores text information in the computer and corresponding audiovisuals on the videotape. Users can carry out a computer search to retrieve specific text and/or video material desired by typing in descriptive words on the computer keyboard. Text is stored in a file card.

Price includes Cavri hardware and software, and 16K board.

**PRICE:**

**TITLE: DISK APPLE II REPORT TEXT WRITER - DART**

**PUBLISHERS NAME: SERVICES UNIQUE, INC.**

**DESCRIPTION:** A program for the Apple II computer which composes reports, articles, letters and other documents, utilizing text files generated by the "DOS Text Editor" (also available from Services Unique), is The Disk Apple II Report Textwriter (DART).

DART is a unique text generation system, utilizing text which may be input in free form format, without regard to line length or pagination. DART retrieves the data from the file, formats it into lines of desired length, and displays it on a printer or Apple CRT. Changing the text requires only that the text file be modified with EDIT-II, and DART called to format and output a new report.

Form letters and standard text can be modified from the keyboard to produce custom letters and reports with the variable input function.

File chaining allows an unlimited amount of input text.

Functions such as page numbering, double space, line centering, title-subtitle, line justification, user defined format characters, parameter file input, and dynamic margins make DART a powerful and versatile text processing system at a reasonable cost.

**PRICE: \$19.95**

**TITLE: DR. MEMORY**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Dr. Memory is a powerful disk based word processor that was designed specifically for the Apple II. Finally, a full function word processor that includes Upper and Lower case plus printer controls. Variable page size, left and right margins, automatic paragraphing and more. A must for every home and

office.

PRICE: \$49.95

**TITLE: EASYFILER**

**PUBLISHERS NAME: INFORMATION UNLIMITED SOFTWARE**

**DESCRIPTION: SAVE TIME**

Use your information processor on any number of tasks; create any number of different data bases for:

- \* Customer/client records: Use EasyFiler to store, manage a report up-to-the-minute details for your customers. Answer their inquiries instantaneously regarding their current orders, back ordered goods, overdue bills, etc.
- \* Inventory control: Keep track of the status of your inventoried items with EasyFiler. Find out quickly without searching through card files and catalogues to determine how many items are in stock, who to order from and who's the second source, what the lead time is when ordering, etc.
- \* Sales Analysis: Which salesperson generates the most sales? What territory needs a more intensive marketing push? Use EasyFiler to store a record of your company sales and then use it to extract information to help your increase them.
- \* Billing: Use EasyFiler, your customer data base and pre-printed forms to print out monthly invoices and bills. Set-up the report generator once -- and month after month your bills are produced, including envelope labels, without individually listing, totaling, and addressing each one on a typewriter.

**QUALITY-TIME FEATURES**

The EasyFiler features listed below allow you to create, manipulate and report business information without spending mistake prone hours leaning over file cabinets and keying in numbers on your adding machine.

**DATA BASE CREATION:**

- \* Unlimited number of databases, each with different characteristics
- \* Unlimited number of records per data base
- \* Up to 50 fields per record
- \* Up to 30 characters per field
- \* Numeric or alphanumeric fields

**INFORMATION PROCESSING:**

- \* Two key record search: you can specify two identifying characteristics, not just one, to retrieve a record within seconds
- \* Change fields in your records after database has been created
- \* Update fields in a record
- \* Delete a range of records with a common characteristic
- \* Extract subsidiary data bases from your master source keying on any field in the record

**PRINT REPORTS:**

- \* Set-up your report once in any format with your report titles, column descriptors and page numbers and use the the form over and over
- \* Page format can be up to 160 columns in width
- \* Print subtotals and totals any place
- \* Print labels for bulk mailings, sorted by any key

**NOW'S THE TIME FOR INFORMATION PROCESSING**

**PRICE:**

**TITLE: EASYSPELLER**

**PUBLISHERS NAME: INFORMATION UNLIMITED SOFTWARE**

**DESCRIPTION:** EasySpeller, a product backed with over 3 years research and development and produced by one of today's leading suppliers of spelling software, has a lexicon of over 88,000



words stored in a highly compacted 94K storage space. For extended applications, it can be used with any IBM DOS ASCII file including BASIC AND FORTRAN source files; not just those created with IUS's EasyWriter I word processing programs. To prevent repeated flagging of words not present in the lexicon (e.g., mnemonics, jargon, proper names, etc.), EasySpeller allows the operator to create and store multiple, user-definable exception files. Consequently, the user can prevent continuous prompting from intended spelling irregularities for more efficient time utilization.

After the pass through the document, EasySpeller allows the operator to select any one of the exception files before correcting the misspellings. Each flagged word in the document is compared against the exceptions. If a match is encountered, the flag is removed. If a special word was inadvertently left out of the exception file when it was created, EasySpeller allows the operator to add it "on the fly" during the correction phase. To aid error correction, EasySpeller displays the entire line for each flagged word, highlights the error, and moves the cursor to the beginning of the word. Above this line, a menu of options, each executed using but one of the keyboard's function keys, is always on the display to inform the operator of his or her options and how to implement them without time-consuming reference to the manual. Particularly useful options in the menu for fast error correction are the Replace Throughout File, Add to Exception File, and Apply Suggested Correction functions.

**PRICE: \$125.00**

**TITLE: EASYWRITER ORIGINAL**

**PUBLISHERS NAME: INFORMATION UNLIMITED SOFTWARE**

**DESCRIPTION:** The EasyWriter Original provides most of the features of the EasyWriter Professional, but uses the Apple's 40 column display. Upper case letters are shown in inverse video. This economical word processor is fast, efficient and powerful. Files created with the EasyWriter Original can be modified for use with the Professional System.

**PRICE: \$99.95**

**TITLE: EASYWRITER PROFESSIONAL**

**PUBLISHERS NAME: INFORMATION UNLIMITED SOFTWARE**

**HARDWARE REQUIREMENTS: 80 column card**

**DESCRIPTION:** Why buy a dedicated word processor? Turn your Apple II into a versatile word processing station with EasyWriter Professional and an 80 column card.

Text is displayed in true upper and lower case, as it will appear on the printed page. EasyWriter Professional uses the Apple shift key so typists don't have to change their habits. The program takes full advantage of the features of letter quality and dot matrix printers including bold print, underlining, italics, and compressed mode, if supported by the printer.

You can store up to 80 pages of double spaced text on a single diskette. Dual drive users can use EasyWriter's copy program to back-up a storage diskette in just over a minute.

EasyWriter Professional comes with a clearly written manual, with step-by-step instructions. On-screen help menus and the reference card make it the easiest word processor for the Apple. Most new users feel at home with EasyWriter after only a few hours.

EasyWriter supports true proportional spacing on printers that have the capability. It is even possible to use EasyWriter for typesetting. IUS typesets all publications with EasyWriter and prints them through a local typesetting shop.



The EasyWriter system comes with a master and back-up program disk, a comprehensive manual and the IUS customer support and update policy.

PRICE: \$250.00

**TITLE: EDITRIX**

**PUBLISHERS NAME: DATA TRANSFORMS**

**HARDWARE REQUIREMENTS:** Graphtrix graphics package from Data Transforms, parallel interface card and printer.

**DESCRIPTION:** Editrix is a screen-oriented text editor for the Apple II. Features include printing while in editing mode, help menus, 220-column horizontal scrolling and automatic footnote formatting.

PRICE: \$75.00

**TITLE: ELECTRONIC SECRETARY**

**PUBLISHERS NAME: HIGH TECHNOLOGY, INC.**

**HARDWARE REQUIREMENTS:** 2 disk drive; parallel/serial acceptable 80 column printer

**DESCRIPTION:** It's a word processor, an electronic phone book, an electronic time manager, as well as a data base management system, all in one convenient package- What more could your executive secretary want?

PRICE:

**TITLE: FORM LETTER**

**PUBLISHERS NAME: MICRO SOFTWARE SYSTEMS**

**DESCRIPTION:** This program takes a letter written with the Text Editor, and the list file from the Mailing List program and prints a copy of the letter for each name on the list. Using special strings, any information from the mailing list file may be embedded in the letter.

PRICE: \$24.95

**TITLE: FORM LETTER MODULE**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Create a letter and the Form Letter Module will print a personal copy for everyone on your Address Book Mailing List when you use the Super-Text Word Processor.

Numerous tutorial sample letters and documents cross referenced with actual files stored on the program disk are contained.

Two copies of the Form Letter Module program disk are provided, plus a liberal damaged disk replacement policy. The Form Letter Module will operate with any Apple compatible printer.

Form Letter Module features include:

- \* automatic, repetitive printing of letters from mailing list records using the Muse Address Book software
- \* individual printing of letters without permanent mailing list storage allowed with the direct entry mode
- \* insertion of mailing list information anywhere in a letter
- \* on-screen prompts query operator for information to be inserted in individual letters
- \* changing content of individual letters dependent on the recipient allowed with special 'commands'

PRICE: \$100.00

**TITLE: FORMAT II**

**PUBLISHERS NAME: KENSINGTON MICROWARE, LTD.**

**DESCRIPTION:** The Main Menu. Commands for the Main Menu, as in

all modes of the system, are mnemonic. For example, to create a New Page, just touch "N". To Print Text touch "P". Touch "M" and move immediately into the mailing list. There is no chaining to disk!

Entering Text...Fasier than a Typewriter

Enter text quickly and a few commands do it all. As on a typewriter, you can access upper case letters with the SHIFT key. But Format II is smarter than a typewriter since there is no need to press RETURN at the end of each line. Format II wraps text from line to line for you.

Effortless Formatting

Touch the "FSC" key and you're in Format Text mode to edit and manipulate. Again, all commands are mnemonic and are brought up with one key stroke. No complicated CTRL functions! For example:

"A" Align a column of numbers. "D" Delete text.

"B" Blank out text.

"E" Edit text.

"C" Center text.

"F" Find text on the page.

Illustrated is "J" Justify text. (Throughout, bottom of screen prompting keeps you on track.) The justification on the screen appears exactly as it will print out. Format II is a "what you see is what you get" word processor.

The Mailing List: Powerful, Versatile

Format II's sophisticated Mailing List rivals the best database management systems. Entries are in a card file format. Each entry reserves a 16 field card, and 442 cards fit on each Mailing List disk. You can add new entries, flip through entries, find particular entries, alter existing, and much more.

Maintain your lists in any order you like (by zip code, city, etc.)

Format II's powerful logic allows you to target entries from your list to be merged with specific letters. To send a letter to all Program City stores listed except those in California, set Format II's logic form Program City AND NOT California. With the logic set for lawyers OR accountants AND California, Format II will print a letter to only those lawyers and accountants who live in California.

A complete range of selections in your hands.

Format II is a machine code program. An immediate benefit is speed- response to commands is instantaneous. Also, Format II loads entirely at once including the Mailing List. Remove the program disk, you won't need it anymore. Only one disk drive is required!

Other Knockout Features:

-Format II works with any printer that connects to the Apple. It performs proportional space justification with Diablo, Qume, and NEC printers.

-For transmission of text over the telephone, Format II will create DOS 3.3 text files for all available communications programs.

-Use Format II to incorporate and edit files created with other programs such as VisiCalc spread sheets.

-A Quick Guide manual that will have you running most features in two hours, and a full reference manual for that weekend to explore all the championship qualities of Format II Word Processing,

**PRICE: \$375.00**

**TITLE: FORMAT ROM**

**PUBLISHERS NAME: SOFT CONTROL SYSTEMS**

**DESCRIPTION:** Some of the powerful formatting instructions which you will have with the FORMAT ROM are as follows: Define Printing Margins; Define the length of a printed line; right hand

justification; Automatic indenting or outdenting of paragraphs; Skipping of lines after each printed line (double space/triple space etc.); Pause after printing so many lines; Center the next line of text (FORMAT ROM figures it out for you); User defined character substitution- FORMAT ROM will even put two spaces after each period it finds, even if you forget and only put one space. PRINT...USING- Will format and tabulate the output of alpha/numerical data that has been predefined by you without having to go through the basic programming steps to get the format requirements. Five modes of PRINT...USING are available: Alpha/Numeric mode will tabulate any predefined string to the left of any predefined numerical data which can be formatted in any of the following output modes; Floating Point or Integer with any number of digits, Fixed output with any number of decimal places with round off capabilities of positive or negative numbers, Fixed output with commas inserted every third digit from the left of the decimal point; the Alpha mode will tabulate and right justify strings of any length. ALL PRINT...USING routines will tabulate, line up all decimal points, right justify, pad the right and left side of a number with any predefined character and can be used within formulas or equations which will then format the mathematical result. Overflow messages or symbols, defined by you, can be printed if a number overflows the limits specified by you. PRINT...USING can be used in immediate or deferred and is compatible with all Applesoft BASIC commands.

**PRICE: \$49.95**

**TITLE: GHOSTWRITER (TM)**

**PUBLISHERS NAME: OMNICO**

**DESCRIPTION:** WORD PROCESSING is not just for the corporate world. Educators can use the finest package available with their Apple computer when the students go home.

**PRICE: \$210**

**TITLE: GOODSPELL**

**PUBLISHERS NAME: APPLE COMPUTER, INC.**

**DESCRIPTION:** A fast, reliable spelling verification system. Safeguards against misspellings. Allows you to produce letters, documents, and presentations more accurately than ever before by helping you rid your text of embarrassing typographical errors. Carefully checks your every word against its 14,000-word dictionary, immediately alerting you when it comes across one it doesn't recognize. Its 3000-word-a-minute processing speed allows you to check an average text file in 60 seconds or less.

**Goodspell:**

- \* its simplicity to operate requires little computer experience to use it
- \* temporary addition of new words to its dictionary as you verify them so individual text files can be checked for foreign, technical, and other uncommon words is allowed

The program quickly reads your text file from beginning to end, stopping at each word it doesn't recognize (misspellings or words not in its vocabulary). It will display the word with surrounding text, and ask you to verify the spelling. If the word is spelled correctly but is not in the program's permanent memory, Goodspell will add the word to its "incremental" dictionary, and pass over the subsequent appearances.

A hard copy of each misspelling is automatically printed out. You can verify as many text files as you want at one sitting and Goodspell will label the error printouts for easy correction later.

**PRICE: \$60.00**



**TITLE: HAM COMMUNICATIONS PACKAGE****PUBLISHERS NAME: 21ST CENTURY TECH****DESCRIPTION:** Includes programs for ASCII and baud teletype decoding complete TTY and C.W. Transmit and Receive.**PRICE: \$18.00 cassette****TITLE: KEY PERFECT****PUBLISHERS NAME: MIRCO-SPARC, INC.****DESCRIPTION:** If you type in programs published in computer magazines or books then you know how frustrating detecting Entry Errors can be. Now KEY PERFECT generates a precision "Check Code" for each 10 Lines of Basic (both Applesoft and Integer) and each 80 bytes of Machine language. Matching this Code against the KEY PERFECT TABLE published with the original program will help you to detect entry errors quickly and easily...without having to proofread each and every line of code.**PRICE: \$29.95****TITLE: LETTER MASTER****PUBLISHERS NAME: MONUMENT COMPUTER SERVICE****DESCRIPTION:** The Letter Master is a lightning fast basic word processor which is simple to use and has the benefits of a character oriented system. The system features a menu driven operating mode which allows the entry, storage, recall, editing, draft printing and final printing of reports or letters. Editing includes such functions as line correction (changes up to 200 characters with automatic movement of text to the next lines as necessary), global search, string replacement, delete, and merge. Text can be selectively stored on disk and inserted wherever needed. Powerful routines allow you to "build" letters or reports from stock paragraphs, phrases or lines. Printing includes automatic pagination, copy designation, right and left justification, user programmable line spacing, and complete margin control. A special system allows both justified and unjustified text to be printed on the same page. The system includes its own mailing list and form letter writing elements so you can build a mailing list and put out up to ten form letters at a time. The mailing list system includes entry, storage, recall, editing, sorting, search and printing routines for up to 500 six line addresses per diskette. The form letter writing element is fully programmable unit with all of the printing features of the word processor itself.**PRICE: \$139.95****TITLE: LETTER PERFECT****PUBLISHERS NAME: LJK****HARDWARE REQUIREMENTS:** Use 40 or 80 column interchangeably (Smarterm- ALS; Videoterm-Videx; Full View 80- Rit 3 Inc.; Vision 80- Vista; Sup-R-Term-M&L Ent.) Reconfigurable at any time for different video, printer, or interface. USE PAYES MICROMODEM II LCA necessary if no 80 column board, need at least 24K of memory.**DESCRIPTION:** EASY TO USE- Letter Perfect is a single load easy to use program. It is a menu driven, character orientated processor with the user in mind. FAST machine language operation, ability to send control codes within the body of the program, mnemonics that make sense, and a full printed page of buffer space for text editing are but a few features. Screen Format allows you to preview printed text. Indented margins are allowed.**PRICE: \$150.00**



**TITLE: LETTER PROCESSOR****PUBLISHERS NAME: SOUND SOFTWARE SYSTEMS****HARDWARE REQUIREMENTS: Centronics 739 printer with grappler interface**

**DESCRIPTION:** This processor features easy editing and modification. It makes form letters a snap. Your own letterhead is built in, but you can use it with your printed stationery as well. The format includes proportional lettering and margination. Letters can be saved on disk for duplication, modification, or review.

**PRICE: \$80.00****TITLE: LETTERITE****PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Letterite system is a powerful personal or small business word processing system. The system allows for the entry, editing, printing and disc storage of letters or small reports. The system allows continuous entry line expensive character systems without the hassle of learning the use of 40 control character commands. Instructions for operation are always on the screen and menus present your options are needed. The system allows for entry of both upper and lower case and can be operated on single or double disk systems. Five fast edit routines make even the "hunt'n peck" typist into a typing pool professional.

**PRICE: \$69.95****TITLE: LEXICOM****PUBLISHERS NAME: NIBBLE**

**DESCRIPTION:** Allows nearly universal transfer of word processing files. Allows the user to:

- \* convert supertext files to Applewriter format
- \* Convert Applewriter files to Supertext format
- \* Convert Supertext or Applewriter files to standard Apple text files
- \* Convert standard sequential text files to Applewriter to Supertext format

Supertext and Applewriter and any word processor that uses standard Apple text files (e.g. Superscribe, Apple Pie) can be used to transfer files back and forth between. In addition, the text files created from Applewriter or Supertext files may be transmitted over the phone lines using any of the communications packages available. Supertext or Applewriter programs can edit text files that are received over the phone.

In addition, Basic programs can be edited with most word processors. And LexiCom offers the only possible tool for converting upper/lower case Supertext files to upper case only files.

**PRICE: \$49.95****TITLE: MAGIC WINDOW****PUBLISHERS NAME: ARTSCI**

**DESCRIPTION:** MAGIC WINDOW transforms your Apple computer into a sophisticated word processor without additional modifications. Simulating a standard typewriter, MAGIC WINDOW requires no special training. All complexities of operation are eliminated by explicit instructions and a unique menu system that simplifies the powerful functions available. There is no need to type in commands, as you select only from the options presented to you. MAGIC WINDOW solves the Apple's video display problem without

expensive hardware additions. The standard document or letter is 80 characters wide, but the apple can display only 40 characters. MAGIC WINDOW's creative solution to this problem is to use the screen as a "window" that slides over a full-size document, allowing you to see all four edges of the paper while you type. This feature lets you position your text on the paper as you type it without inserting the formatting commands required by other systems.

Using very simple keystrokes, MAGIC WINDOW will manipulate paragraphs and make additions, deletions and corrections before printing. Centering and justifying are facilitated by your ability to see the text on the screen. Most paper sizes can be simulated, giving the user the ability to type on an electronic replica of the document to be printed.

With a single keystroke, the MAGIC WINDOW is moved from side to side. You never need to hit return when your text touches the right margin, as the last word is automatically picked up and moved to the next line. When you reach the bottom of the page, the "window" will jump to the top of the next page. You keep typing without interruption.

#### Additional Features:

TYPE AHEAD BUFFER- This unique feature allows you to type on the keyboard as fast as you can without fear of losing any words. With MAGIC WINDOW you don't have to wait for the system to catch up with you.

GLOBAL SEARCH- This command allows you to find repetitions in your document that you would like to change consistently. In other words, you can easily change all Mr. Smiths to Mr. Joneses.

EXPANDABILITY- MAGIC WINDOW will utilize your lower case adapter, language system and custom printer drivers for Centronics, Oume, Diablo and many other printers.

STORAGE- MAGIC WINDOW uses two types of disk storage: binary files and sequential text files. The text files can be used by other programs or for electronic mail. Binary files are used to store your formatted documents.

A four-color keyboard chart is provided for a quick graphic reference of editing commands. Its logical keyboard layout facilitates rapid learning. Complicated command sequences are eliminated altogether.

The real power and sophistication of a word processor is judged by how easy it is to use. MAGIC WINDOW's single keystroke commands make learning and operating it a pleasure.

MAGIC WINDOW is being used by universities and technical institutes to teach electronic word processing.

**PRICE: \$99.95**

#### **TITLE: MAGIC WINDOW II**

#### **PUBLISHERS NAME: ARTSCI**

**DESCRIPTION:** While retaining all the ease-of-use characteristics that made MAGIC WINDOW the user's favorite, MAGIC WINDOW II includes the following advanced features:

- \* Both 80-column board and standard 40-column compatibility
- \* 160 characters maximum line length
- \* Search and replace
- \* Shift key modification compatibility
- \* Paragraph glue and justification
- \* Underlining supported
- \* Goof-proof file safety system
- \* New comprehensive instructional reference manual
- \* Fully compatible with entire MAGIC SERIES
- \* Two master diskettes provided.

**PRICE: \$149.95**

**TITLE: MAGIC WORDS****PUBLISHERS NAME: ARTSCI**

**DESCRIPTION:** The average person has a working vocabulary of 1,100 words and 10% of those are usually misspelled. These common errors are not only embarrassing but also expensive. Many job opportunities have been lost because of unprofessional spelling errors. Don't you wish you could avoid such mistakes altogether? You can.

ARTSCI has created a professional proofreading system that uses the same positive features of MAGIC WINDOW: menu selection of options, natural engineering, simplicity of use, accuracy, and speed.

With MAGIC WORDS, and entire page is proofread for spelling errors and typos in seconds. When mistakes are found, you see the words in context on the screen or print out, and are given choices of how to handle each one.

MAGIC WORDS' main dictionary is more than ample, with 14,000 words (thousands more than the average person uses.)

Exceptional individuals will appreciate the user dictionaries which can hold thousands of extra words. New words, client's names, or specialized terms, can be added when found and edited with MAGIC WINDOW.

MAGIC WORDS operates on a single or multiple disk drive system. Simply boot the MAGIC WORDS diskette and with a few keystrokes your entire document is proofread in moments.

MAGIC WORDS' advanced features provide you with the most flexible system created for the Apple. You may print an error list, create a marked disk file, and check files in an unattended mode—separately or simultaneously. The most impressive feature is the ability to place a corrected document file on a diskette, eliminating the need to reedit an error filled document.

User dictionaries are generated each time a correct word is found that is not contained in the working dictionary, and can be saved for later access. Multiple user dictionaries can be made as well, and efficiently edited and stored by the MAGIC WINDOW word processor. Additionally, MAGIC WORDS counts the number of words in each document and provides you with a printed report of the total.

**PRICE: \$69.95**

**TITLE: MIGHTY MITE (WORD PROCESSOR)****PUBLISHERS NAME: PERSONAL COMPUTER SERVICE**

**DESCRIPTION:** Contains a 20 by X 38 character CRT display which is formatted to a 10 line X 76 character hard copy print out. Line and column numbering for easy screen access, along with instant access to any one of 20 CRT pages of text are included in the CRT display.

Mighty Mite's editing features and full curser control make editing not only simple but even pleasurable. The "Auto-Word" feature actually permits the user to name a word or phrase (up to 30 characters) which is automatically typed in the text by one key! Lower case generation now included.

**PRICE: \$39.95**

**TITLE: MULTI-MESSAGE WITH INTERLEAVED COLOR PATTERNS****PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** Up to 10 messages can be run in sequence, colorful, dynamics patterns (kaleidoscope or abstract art) can be interleaved between messages, at user option. Consists of 28 crisp, readable characters/line X4 lines/page X3 of text per



message. Characters 1/8 screen-height and "puff" onto the screen at comfortable reading speed.

**PRICE: \$35.00**

**TITLE: PAGE PROCESSOR**

**PUBLISHERS NAME: COMPUTING CONCEPTS**

**DESCRIPTION:** Many built-in features and options are contained in this program. Adaptable for use with other printers or as a CRT screen word processor without printer. Some features included are: centering, tabbing, line insertion and deletion. Pages may be stored on disk. One disk and six page documentation manual.

**PRICE: \$29.95**

**TITLE: PERSONAL TEXT PROCESSOR**

**PUBLISHERS NAME: CREATIVE DISCOUNT SOFTWARE**

**DESCRIPTION:** This word processor can be used in the office or in the home. Included features are continuous entry, automatic line formatting, a six function edit system, text merge, printing of a numbered draft and final copy, printing with such user selected features as page printing and "COPY" indication.

**PRICE: \$66.00**

**TITLE: PIE WRITER**

**PUBLISHERS NAME: HAYDEN BOOK COMPANY**

**DESCRIPTION:** PIE WRITER is a new and versatile word processing system that turns your Apple II microcomputer into a powerful editor and formatter. PIE WRITER has been created to take full advantage of the Apple II's capabilities. The formatter enables you to easily type reports, memos, letters, direct mail pieces, term papers, and many other documents and store them on a disk. An original and accurate copy is printed every time. You can use PIE WRITER's fast and accurate editor to alter a character, word, sentence, or even a paragraph or document.

PIE word processing software has received wide acclaim from many reviewers - "...one of the best word processors available for the money. It has an abundance of user-oriented features...is very fast and has a powerful editor. Has to be considered a best-buy word processor. For the money spent, it cannot be beat. The aesthetics of the input, the power of the editor and formatter, and the flexibility are impressive."

**Features**

- Easy-to-understand instruction manual including an index.
- A type-ahead buffer enabling you to continue input while the machine is scrolling.
- Incremental spacing for Daisy-wheel printers
- Multiple tabbing capabilities: word tabbing and set stops
- Call command allows access to machine language subroutines
- Formatted output can be saved to disk
- Switches in and out of the system monitor easily
- Fast, powerful screen editor
- Simple commands allow placement, deletion, or correction of characters, words, sentences, and paragraphs
- Automatic wrap-around
- Lower-case capabilities
- Global word search allows the user to replace or correct words individually or throughout the text
- Extremely effective with standard 40-column Apple; 80-column boards require special version
- A "help" screen lists key commands for reference during text editing

You can easily load PIF WRITER into an Apple II microcomputer.



The simple documentation is indexed so that you can turn to the page that will explain, step-by-step, how to quickly proceed with any document.

You can immediately begin to type text onto the screen. As you type, if you decide to change a word, sentence, or paragraph, one simple key stroke will enable you to add or delete text.

After the screen is filled with text you can quickly edit it. If you want to add text, simply move the cursor to the spot where an addition is desired and type it it. If you want to delete text, move the cursor to the spot where you want to delete a word, sentence, or paragraph and type in the delete command.

If a word is misspelled, PIE WRITER's "search and replace" command will correct the word throughout the entire text. You can also quickly delete and correct a single word. PIF WRITER is designed so that a lower-case adaptor such as those from Dan Paymar, Lazer Systems and Videx, can be implemented.

When the document is edited and the desired formatting commands have been entered, simply run it off on the printer, where it will appear in the format you have specified. The printed copy is neat, precise, and always accurate.

**PRICE: \$149.95**

**TITLE: PIG PEN**

**PUBLISHERS NAME: EASTERN HOUSE SOFTWARE**

**DESCRIPTION:** Our word processor which uses the text editor of the Apple \$49.95 Assembler. Features include: footers, shapes, right and left justification, etc. 100% machine language. Very fast-text processing.

**PRICE: \$40.00 Manual + Cassette  
\$45.00 Disk**

**TITLE: PRINTER TYPER**

**PUBLISHERS NAME: INDIAN HEAD SOFTWARE**

**DESCRIPTION:** Operating your Apple and printer as a correctable electric typewriter to produce routine correspondence allowed. String centering, indention, single or double spacing, and end of line warning, are included features. A very useful program for those with word processing software or electric typewriters. Versions available for Centronics 779 and Epson printers.

**PRICE:**

**TITLE: QUICKWRITER**

**PUBLISHERS NAME: LAST**

**DESCRIPTION:** Options of the more sophisticated and expensive systems are included in this easy-to-learn, user-oriented word processing system. Quickwriter provides: Right Justification, Automatic Centering, Tab Settings, Use of Special Characters within Text, Easy Modifications, Total or Precise Reviewing, and Customized Print Options. Text is saved to disk files and files may be printed in succession resulting in unlimited length for documents- one paragraph or an entire book.

**PRICE: \$14.95**

**TITLE: REPORT WRITER**

**PUBLISHERS NAME: MONUMENT COMPUTER SERVICE**

**DESCRIPTION:** The Report Writer is our most complete word processing system suitable for both business and professional applications. The system features an editing system unmatched by any other similar system anywhere and the ability to process

almost endless volumes of text for contracts and reports. The system includes its own built-in, mailing list element and form letter preparation system. With these special elements you can automatically print customized form letters for those special sales programs or just to send a truly personalized holiday letter. The mailing list element allows you to create specially coded letters that you can use to keep track of hot leads or simply segregate the list into your own special groups. The powerful endless text processor allows you to forget about the ends of your lines. Text automatically floats to fit your print specifications. Text created can be reformatted to any configuration you may later require. You can create mixed text with parts justified, parts free form, and parts centered.

**PRICE: \$200.00 disk and operating manual**

**\$ 50.00 operating manual**

**\$249.95 Apple II/II Plus with a Corvus Systems Hard disk**

**\$249.95 Apple III**

**TITLE: SCREEN WRITER**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**HARDWARE REQUIREMENTS: Printer**

**DESCRIPTION:** SCREEN WRITER is a state-of-the-art word processor that gives you the highest control of the written word available for the Apple Computer.

SCREEN WRITER word processor was designed to give you the power to easily arrange text so that it prints exactly as you want it to appear, no matter what the format. Form letters, legal contracts and other important documents may be reviewed and updated with just a few simple commands. Often used formats may be saved on disk and called up later as the basis for a new document, thus saving word processing time.

SCREEN WRITER is a complete word processing system. All you need is a standard 48K Apple II/II+ computer system with a disk drive and a printer. No expensive "extra" hardware that costs you money and causes problems. We even have features that other microcomputer word processors CAN'T offer; features like printer spooling, upper/lower case, seventy columns on screen and a software based keyboard buffer. All these features are available without the need for additional hardware. SCREEN WRITER is the only word processor that offers all these features without special hardware.

SCREEN WRITER is a professional word processor, yet is simple enough for even a novice to understand. The first time user and the word processing professional can feel equally comfortable with the system in a very short time.

SCREEN WRITER was built to be user friendly. We have strived to relieve you of the annoyances that may distract you from your work. The processing commands are easily learned, and a complete listing of the commands is included in the actual program. A handy user reference of printing and editing procedures.

- \* GLOBAL SEARCH AND REPLACE- Change whole words and sentences throughout a file, quickly and easily.
- \* INSERT AND CHANGE MODES- Two editing formats to assure full coverage of your word processing needs. Insert Mode allows you to insert text by moving text forward to make room for it. The Change Mode allows you to write over old text, deleting at the same time. Switching between edit modes is as easy as one keystroke.
- \* MACRO CAPABILITIES- Assign commonly used words, phrases or commands to special keys, making your processing more efficient by eliminating the need to type in the same sections of text multiple times.
- \* SUPPORT OF SPECIAL FUNCTIONS- Special commands allow you to

initiate and change values in special printer drivers and BLOAD Hi-Res images for plot in on your printer.

- \* PROPORTIONAL SPACING- Supports proportional spacing on many printers (NFC, QUME, DIABLO CENTRONICS).
- \* TEXT MOVE- Move whole sections of text around with just a few key strokes.
- \* GENERATION OF INDICES- Generate up to four tables or indices while you type in your document with a few simple commands.
- \* PRINTER SPOOLING- Makes your word processing time more productive by allowing you to print and edit at the same time.
- \* SUPPORT OF YOUR EXTRA HARDWARE- SCREEN WRITER makes full use of your ram cards and extra disk drives to make word processing quicker and easier.
- \* HYPHENATION- Make your final copy look better by eliminating unsightly "holes" in your text.
- \* FORM LETTER CAPABILITIES- Generate form letters from mailing lists you create quickly and easily. Special commands allow conditionals to "personalize" your form letters.
- \* COMPLETE EDITING AND RUNOFF FUNCTIONS- Centering, boldfacing, underlining, complete formatting capabilities and direct interface with your printer.
- \* CURSOR MOVEMENT- Movement of the cursor in our text moves by character, word, line, page or to the beginning or end of the document.

#### Product Support

A trained staff is standing by to offer support of your ON-LINE SYSTEMS product every business day. In addition, our support staff is in constant contact with the author of your program, thus making sure that your question will not go unanswered.

#### Constant Updating-

ON-LINE SYSTEMS is always working to make its products better and more versatile. We will not let your software become obsolete. Registered owners will be given the opportunity to take advantage of ON-LINE SYSTEMS agreeable upgrade policy whenever new features are added to our software package.

**PRICE: \$129.95**

#### **TITLE: SELECT**

##### **PUBLISHERS NAME: SELECT INFORMATION SYSTEMS**

**DESCRIPTION:** The first self-teaching, English speaking, easy to learn word processing program. Instead of hours and days, it takes 90 minutes or less. You learn right on the screen, at your own pace, easily, instead of pouring over a complex manual. SELECT uses easy to remember, single letter instructions, instead of requiring complicated commands. For example, type "J" to insert words, and "F" to erase. Key in "J" to justify, "C" to create a new document, "P" to print, and "T" to teach.

Includes an on-screen HELP mode that quickly reviews the instructions to remind you how to execute virtually any command. Here's how it works: Let's say you are in the middle of composing a document, and have forgotten how to move a block of copy from one place to another. Simply key in the letter "H" for help, and then "M" for "move," SELECT will immediately display the simple instructions. Push another button, and you're back at work.

Once you have finished composing your document, touch the letter "S" and SELECT will proofread your document from top to bottom, and pick out and display (in alphabetical order) each word that does not appear in its multi-thousand word vocabulary. If it's a typo or misspelling, SELECT will automatically search through the entire document and replace each occurrence of that particular word, in seconds.

Imagine that you've written and are about to deliver a 30-page



proposal for a prospective client. Suddenly you realize that their company president, whom you have referred to as "Charlie" throughout the proposal, actually calls himself Charles. No problem. Simply hit "R" for "Replace," key in the word "Charlie" and then Charles. SELECT will rejustify the entire document. This program keeps track of your mailing list, whether it's your own personal address book or thousands of names long. With MERGE PRINT you can write one version of a letter, then have SELECT type out an individual copy to each name on your list, automatically changing the inside address and the salutation, (and if you've added a personal touch in the body of the letter such as "And so in closing, Bill...", SELECT will change "Bill" to each new name on your list. (Then it will print out mailing labels to match).

**PRICE: \$399.00**

**TITLE: SUPER MESSAGE**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** Creates messages in full-page "chunks". Each message allows statements of mixed typesizes, typesizes and colors in mixed upper and lower case. Styles range from regular Apple characters, up to double-size, double-width characters with a heavy, bold font. Six colors may be used for each different typestyle. Vertical and horizontal centering are available, and word-wrap is automatic. Users can chain pages together to make multi-page messages. Pages can be advanced manually or automatically. Multi-page messages can be stored to disc or recalled instantly.

**PRICE: \$50.00**

**TITLE: SUPER TEXT**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** Super Text 40/80 column is the latest development in word processing software, from Muse. The program features sophisticated functions, including the option to display an 80 column screen with the use of a Videx Board, and to insert page headers and footers. Most functions have been reduced to a single key command, making execution the fastest and most efficient available. Other pluses included a multi-file search-and-replace function, a display of disk space availability, a user definable key allowing you to define words or phrases up to 30 characters long with one key, and the ability to count occurrences of specific words or phrases in your files. Super Text also boasts an enhanced math mode, split screen option, advanced block operations, and Autolink of multiple files. Documentation that has been redesigned with the beginner in mind as well as the sophisticated user, is included with the program.

**PRICE: \$175.00**

**TITLE: SUPER-TEXT 40/56/70**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** MUSE Software announces the release of Super-Text 40/56/70 Column Word Processor. It lets you choose 40, 56, or 70 column screen display without any additional hardware! Super-Text 40/56/70 turns your Apple into the ultimate word processor with features like page headers and footers, a user definable key, multi-file search and replace, preview mode, Autolink, and more. Super-Text 40/56/70 introduces the "Character Designer", a feature that lets you create display characters any way you wish: in cursive, foreign languages, with special symbols, etc.! Super-Text 40/56/70 provides the best features and the best value



in word processing. Add the Form Letter Module, Address Book, and The Sensible Speller for super efficiency with Super-Text. Super-Text 40/56/70 is designed for the Apple II with 48K and disk drive and is now available at computer stores nationwide or from MUSE Software.

Still available from MUSE: Super-Text 40/56/70 Column Word Processor, with 80 column screen display (lower case adapter or 80 column board required), and the professional Math Mode and Split Screen features.

Super-TFxt 40/56/70 displays 40, 56, or 70 columns without extra hardware. The 56 column screen is the only one of its kind and is a most readable character set to work with. Super-Text 40/56/79 has elegant editing features: page headers and footers (page numbering in various positions), multi-file search and replace for finding and replacing words or phrases throughout your files, Preview Mode to review page endings before printing, and a unique Autolink system to link files together for one-step search-and-replace or print functions. Complete printer tab controls in your text files make formatting simple. The tutorial documentation in Super-Text 40/56/70 provides supportive explanations and diagrams and the quick reference card serves as a handy overview of the program. The innovative "Character Designer" feature lets users create characters any way they choose: in cursive, foreign languages, with special symbols, etc. for a unique personal application! This combination of features makes Super-Text 40/56/70 an exceptional value in word processing. Super-Text 40/56/70 will be sold along side Super-Text 40/80, the MUSE word processor with 80 column screen display, (using an 80 column board), and the Math Mode and Split Screen features for different professional applications.

**PRICE: \$125.00**

**TITLE: SUPER-TEXT ADD-ON MODULES**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** The Super-Text Form Letter Module personalizes and customizes form letters. Use it with the Address Book Mailing List Program or by itself to end repetitious composition of letters, contracts, leases, and other documents. Add the Super-Text Terminal Module and a D.C. Hayes Micromodem to communicate with any computer in the world.

**ADVANCED FEATURES:**

- \* split screen for editing
- \* math mode for preparing statistical reports
- \* optional file linking for global search and print operations
- \* form letter generation and mailing list management add-on modules...and much more.
- \* preview mode formats line endings and page breaks on screen before printing

**EASE OF USE:**

- \* automatic word overflow
- \* single key cursor control
- \* automatic on-screen tabbing
- \* automatic paragraph indentation
- \* block copy, save and delete
- \* tutorial manual and handy reference card
- \* dual disk copy program for file backup...and much more.

**PRICE:**

**TITLE: SUPER-TEXT II**

**PUBLISHERS NAME: MUSE SOFTWARE**

**DESCRIPTION:** The Super Text II Word processing system provides fast editing of letters, manuscripts, books, or other printed

material. Automatic column totals, column alignment, and on screen tabbing eliminate tedious formatting and make Financial and Summary Reporting a snap. Data Base Management is simplified by the most advanced file handling system and makes a world of information instantly available.

**PRICE: \$150.00**

**TITLE: SUPERSCRIBE II**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:**

- \* Gives true lower/upper case text on your screen with no additional hardware whatsoever
- \* Documents larger than the amount of memory in your Apple, transparently to you will work with this system
- \* Will edit not only letters but also any text or binary file, or even basic programs
- \* Generates up to 4 separate indices for your document automatically
- \* Save typing time through a unique ability to designate specified keys as commonly used words, phrases or even commands
- \* Globally search for or replace character strings
- \* Built-in instruction capability such that if you forget how to use a command and the manual is not close by- you may simply as SuperScribe II
- \* 70 column review
- \* Language card or any 16K expansion RAM card to keep more of your document readily available in memory is supported
- \* Hyphenations made
- \* Proportional Spacing
- \* Works with any printer
- \* Multiple disk drives are supported
- \* Supports alternate character sets
- \* Lets you work with your text on a screen at a time basis- reducing typos and allowing you to see your document as you edit it.

**PRICE: \$129.95**

**TITLE: TEXT EDITOR**

**PUBLISHERS NAME: MICRO SOFTWARE SYSTEMS**

**HARDWARE REQUIREMENTS: Printer**

**DESCRIPTION:** The Peripherals Unlimited Text Editor is a fast, simple to use program designed for the small business or personal user. Text is processed in memory on a line by line basis. When the user is finished with the text, he may print it and/or save all or part of it to disk for later use.

Upper and lower case operation is fully supported. Upper case letters are shown on the monitor as Inverse video. If the computer has a hardware adapter (such as the Dan Paymar board) true upper/lower case is displayed.

**FEATURES:**

- \* Files may be loaded, appended or inserted into text already in memory. All or part of the text may be saved for later use.
- \* Files are saved on disk in standard text format. Basic programs saved as text files may be edited and later EXEC'd into the system. Ideal for creating EXEC files.
- \* Line width is user controlled.
- \* Advanced left/right fill justification.
- \* Very fast FIND capability, optional printer log of found strings.
- \* Global string replace.
- \* This program may be used in conjunction with our Mailing

- List and Form Letter program to create personalized letters.
- \* Text may be printed or justified, with or without line numbers or title. Printing format determined by the user, or user defined defaults.

**CAPACITY:**

- \* Approximately 250 lines of 80 characters may be held in memory at any one time. (About 5 printed pages)
- \* If a file is being saved to a full diskette, you are told that the diskette is full, giving you the opportunity to save the text on a different diskette.

**SPEED:**

- \* Justification of text: Approximately 3 lines/second.
- \* Find and Replace functions: 2 seconds per 300 text lines.
- \* Delete: up to entire text in 3 seconds.
- \* Print speed depends upon type of printer and driver card.

**PRICE: \$64.95**

**TITLE: TEXT EDITOR I**

**PUBLISHERS NAME: DYNACOMP, INC.**

**DESCRIPTION:** An easy to use, line-oriented text editor which provides variable line widths and simple paragraph indexing. This text editor is ideally suited for composing letters and is quite capable of handling much larger jobs.

**PRICE: \$14.95**

**TITLE: TEXT FILE EDITOR**

**PUBLISHERS NAME: EDUWARE SERVICES**

**DESCRIPTION:** This versatile editor can take the hassle out of working with sequential files, as well as making them do more for you. Editor can be used to create, combine or manipulate files using 3.1 or 3.2 releases of LOS. A 17-page manual contains instructional, reference and modification material, suiting both the lifeline programmer and the beginning disk-booter. Can also be used to unlock the secret hidden in the files of Compu-Read, Sinata, Subliminal, Network, and Terrorist.

**PRICE: \$24.95**

**TITLE: TEXT POWER**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION:** TEXT POWER is a powerful word processor that supports over 50 easy to use commands relating to entry of data, editing, disk input/output, data display and text formatting. This software package has over 50 pages of comprehensive documentation major features include: Sup'r Terminal and Videoterm 80 Column Board Compatibility, Dan Paymar Lower Case adapter compatibility, Report Formatter, Optional Dual Column Print Format, Multiple File Merging, Global Search and Changers, Move and Duplicate Line or Paragraphs, Supports Multiple Disk Drives, Full Scrolling and Stop List Functions.

**PRICE: \$79.95**

**TITLE: THE APPLE SPELLER**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**DESCRIPTION:** A spelling verification program that reads your manuscripts and checks them for spelling errors. Works with any word processor that writes a standard Binary or TEXT file: including Appewriter, Apple Pie, Magic Window, Superscribe II, and Word Power. Options are available to automatically mark each misspelled word in the document or to see the misspelled words in the content of the sentence. The Apple Speller highlights each



misspelled word in the context in which it was used when this verify mode is activated. You may then choose to mark the word, add it to the dictionary, or ignore it. It can proofread a 10-page document (about 3350 words) in 1 minute (if there are no spelling mistakes) or 2 minutes, 15 seconds for an unlimited number of spelling mistakes. An advanced packing algorithm is used by the dictionary disk so that it may contain approximately 38,000 words, or which 30,000 words are supplied. The program provides an easy means of adding, deleting, or creating new dictionaries with the words that you most often use. You can have as many different dictionaries as you like (possibly one for legal letters, one for your Apple related articles, etc.).  
**PRICE: \$75.00**

**TITLE: THE CORRESPONDENT**

**PUBLISHERS NAME: SOUTHWESTERN DATA SYSTEMS**

**DESCRIPTION:** Write letters and other materials on your Apple II at an affordable price with this text editor! It can be used as a very fast database for storing notes, phone lists, or anything where report generation is not essential.

- \* Delete/Move/Copy whole paragraphs of text.
- \* Upper/Lower case supported
- \* Right hand justification of printer output
- \* Control characters for your printer are allowed
- \* 40-80 column output. Screen scrolls down, up, right and left. Freeze portions, or create your own separate note pages.
- \* Character on line editing
- \* User oriented: Text appears on the screen just like it will be output- no confusing formatting characters
- \* Link files to print out entire text at once on manuscripts
- \* Fast find routine makes it invaluable as a database. Enter data as you would on a piece of paper. Use the find routine to retrieve any information instantly.
- \* Access sequential or random text files. Useful for not only the editing abilities, but the examine and transfer data files. The Correspondent can even be used to build your own FXFC files.
- \* Special routines are provided to put the bi-directional scrolling of either pg. 1 or 2 of text/gr in your own programs
- \* Move to either beginning or end of file, or to a block marker of your choice is simple
- \* Screen tabbing, variable page length and width
- \* Automatic line centering
- \* Save all or part of any file to disk

**PRICE: \$59.95**

**TITLE: THE DATACOPE SCRIBE**

**PUBLISHERS NAME: DATACOPE**

**DESCRIPTION:**

**WHAT IS THE DATACOPE SCRIBE?**

It is a comprehensive word processing program for the Apple II. Designed to be simple to learn and use. Incredible power, combined with ease of use, puts the Datacope Scribe in a class of its own.

**WHEN IS THE DATACOPE SCRIBE USED?**

Anything you need to write. Personal letters, business letters, manuscripts, program instructions, reports, resumes, books, as copy, brochures - all are easier to write using the Datacope Scribe. Repetitive work, particularly form letters and legal documents, becomes a snap.



#### WHAT IS DAN PAYMAR'S LOWER CASE ADAPTER?

The Lower Case Adapter is an easily-installed plug-in device that allows the Apple II to display lower case characters.

#### HOW MUCH TEXT CAN I GET IN MEMORY?

At approximately 2000 characters per full page, you can put eleven pages in memory, along with Scribe and its help files. Without the help files, fifteen pages.

#### HOW MUCH TEXT CAN I GET ON A DISKETTE?

roughly 100,000 characters can be stored on a diskette, therefore you should be able to store at least fifty pages.

#### WILL I NEED TO MODIFY THE SYSTEM TO MAKE IT WORK WITH MY PRINTER?

The system can modify itself to work with any printer that interfaces properly to an Apple, including printers that are turned on by a CALL. You may also take advantage of special features - such as double wide characters and variable line spacing - that your printer offers.

#### HOW FAST WILL THE PROGRAM ACCEPT TEXT?

Faster than you can type. The entry and display routine is quicker than the Apple's monitor input.

#### IS SCRIBE EASY TO LEARN?

Yes! The commands are straight-forward single-letter mnemonics, and easy to remember. You actually see what is happening when you edit text. Rest of all two quick-reference guides are available at any time to help you remember the commands.

#### CAN SCRIBE PERFORM PRODUCTION PRINTING?

Yes. When you are ready to print, you simply tell the Datacope Scribe how many copies to print and it will continue unassisted. If you need to include different names or addresses in each copy, simply tell Scribe to stop printing, accept text from the keyboard, and insert it into each copy.

#### CAN I GET FANCY FORMATS?

Yes. You can specify the left and right margins, right margin justified or right margin ragged, single or double spacing, tab positions, page numbering, and number of lines per page. Most of the formats may be specified at any point in any time. In addition to these general format specifications there are specific format commands such as center, indent, and underline.

#### WHY IS TEXT SO EASY TO EDIT WITH THE DATACCOPE SCRIBE?

Although it is a lot more difficult to program, character editing is the most convenient method for the user. The Datacope Scribe is a character editor that also edits by word, sentence, paragraph, or any arbitrary group.

#### WHAT DO I DO ABOUT BACKUP?

Since the Datacope Scribe is copyrighted and recorded on copy-protected diskettes, you may purchase a second unit for a nominal fee when you return the serial numbered software registration card with proof of purchase. Datacope also offers quick replacement on warranty service.

PRICE: \$79.95

#### TITLE: THE DICTIONARY

#### PUBLISHERS NAME: ON-LINE SYSTEMS

DESCRIPTION: What your word processor needs is a good dictionary and ON-LINE SYSTEMS offers you the best. The DICTIONARY by Tom Cain, is a twenty eight thousand word spelling verification package that offers more than just spelling verification. Our special "word search" feature allows you to look up the correct spelling errors without ever opening an (old fashioned) dictionary. This program even works on a SINGLE disk system. Get THE DICTIONARY. It's more than a spelling verification system.

PRICE: \$99.95

**TITLE: THE EXECUTIVE SECRETARY**

**PUBLISHERS NAME: SOF/SYS, INC.**

**DESCRIPTION:**

GENFRAI.

Editing, printing, form letters, mail-merge, and electronic mail all in one package at one price.

With The Executive Secretary there's no other software required. A one-time purchase gives you many office-of-the-future features, including the ability to produce highly customized form letters by merging letters with mailing lists, and the ability to send documents via telephone line from one computer to another, or from your computer to remote typesetters or other computers.

Connects with other programs.

Although our built-in card file is more than adequate for many database applications, we didn't want to re-invent the wheel. A simple two letter command embedded in a document with data from popular database programs. The Executive Secretary enhances what you already have.

User's manual designed for the office user.

The Executive Secretary was not designed for the computer hobbyists. It makes the personal computer a professional word processing system. Its manual assumes no technical part of the user (though it does assume that someone has connected the hardware).

Menu driven throughout.

In almost every case, the user's current options are displayed on the screen, either as a full menu or as a single prompt line. Most options require only a single keystroke, and the choice of keys is intuitive ("r" to replace, "d" to delete, etc.).

In almost every case, use of the CTRL key is not required. We achieve this by making a logical separation between typing and editing, with a singly keypress toggling between the two modes.

**MANUAL**

Complete index.

Organized as a set of lessons.

Convenient quick-reference card.

Easel-bound for ease of use.

**THE DOCUMENT EDITOR**

Keeps up with professional typing speeds.

Supports user-defined phrase abbreviations.

Supports file merge and unmerge.

Supports global search and replace.

Of course, all the things you would expect any editor to do are supported. Block operations: move, transfer, delete.

Character/word/line: insert, replace, delete.

Allows embedding of printer control commands.

**THE DOCUMENT PRINTER**

Allows mail-list merging between documents and many popular database programs. With some effort, allows you to merge from your own specialized databases.

Database records of up to 100 fields per record can be attached with a simple one-word command, and all the fields of each record are then available for incorporating at random throughout the document.

Accepts and integrates immediate and delayed keyboard input during printing.

Supports all major printers.

Supports print preview.

Has IF and related commands to allow conditional printing

information based on the contents of database.

Prints page headers of arbitrary complexity.

Prints page numbers wherever you want them.

Supports file chaining and file nesting.

Allows great flexibility in horizontal and vertical tabbing so that printing on pre-printed forms is simplified.

Has multi-level outline indenting.

Has left- and right- justified tab stops.

Gives full control of all margins, line spacing, dynamic text reformatting, centering, underlining, justification and overstriking.

#### DATABASE MANAGEMENT

In addition to being able to use some of the most popular commercial database systems, The Executive Secretary includes its own moderately powerful electronic card file.

#### INTEGRATED CARD FILE FEATURES

Allows multiple card files per disk.

Allows user to define size and contents of "cards" in each file with up to 13 lines per card.

Generates new subset card files based on search or sort criteria for an existing file.

Incorporates one/multiple line report printer with totals and subtotals on selected fields.

#### ELECTRONIC MAIL SYSTEM

Menu driven.

Fully automatic with Hayes Micromodem or Hayes Smart Modern (IBM) Receiving phone number is automatically dialed, receiving computer (with the Executive Secretary) checks for disk space, renames the document, and adds to the menu after successful transmission. Alternative transmission modes allow receiving files from or sending them to other computer systems not equipped with the Executive Secretary.

#### OTHER FEATURES

A built-in indexer allows you to produce alphabetized, two-level-page-referenced alphabetical indexes for your documents automatically.

With the appropriate hardware time-stamping of documents and automatic date-insertion in finished documents are both supported.

A quick-note mode allows the user to write, edit, and print a document with a minimum of keystrokes.

#### SYSTEM CAPACITIES

Approximately 16,000 characters (3000 words) can be edited at one time. Through file nesting and chaining, the effective length of a printed document can be more than 20,000 words- over 50 typewritten pages.

On a one-disk system, documents and databases must be on the same diskette for mail/merge purposes. On a two-drive system databases and documents must be on separate diskettes. (A document transfer feature makes it easy to shift between these modes).

**PRICE: \$250.00**

#### **TITLE: THE EXECUTIVE SPELLER**

**PUBLISHERS NAME: SOF/SYS, INC.**

**DESCRIPTION:** The Executive Speller is a useful companion to both the Secretary programs. It helps you to proofread documents prior to actual printing.

The supplied list contains 10,000 words and can be expanded to 25,000 words.



As you proofread a document, spelling errors are shown in context.

You can correct errors while proofing. Finding and correcting are one process, not two.

Complete spelling list managements capabilities let you generate new spelling lists, add words to your current list while proofing, delete words from the list, make up temporary lists, etc.

**PRICE: \$75.00**

**TITLE: THE GENERAL MANAGER**

**PUBLISHERS NAME: ON-LINE SYSTEMS**

**DESCRIPTION:** When ON-LINE SYSTEMS started work on a data base manager, we wanted one that was more powerful than any that the Apple marketplace had ever seen. It had to be fully modifiable and offer all the features that other data bases offered and couldn't deliver. The final product was THE GENERAL MANAGER, a hierarchical data base system designed after large mainframe data bases. The G.M. is a complete, powerful data base that will handle any job that you give it. The system is completely modifiable, and offers a special Applesoft interface so that you can connect your basic program to THE GENERAL MANAGER and its data files. Selected fields and records may also be written to standard text files for use with your word processor or other software.

**PRICE: \$149.95**

**TITLE: THE PERSONAL SECRETARY**

**PUBLISHERS NAME: SOF/SYS, INC.**

**DESCRIPTION:** Ideal as an at-home word processor. The Personal Secretary is upward compatible with the Executive Secretary and delivers many of its features at a fraction of the cost:

The editor keeps up with professional typing speed, supports manual global search and user-defined printer abbreviations. Block operations include move and delete, and all other editing features are identical with Executive Secretary's.

The printer allows mail-list merging with the built-in card file, integrates keyboard input, allows conditional printing-based on the IF command, supports left- and right- justified tab stops, margin control and justification. Specifications for regular indenting, justification and centering may be embedded in the document.

The built-in card file program allows one card file per diskette with up to 299 records per file and 7 lines per record. The file may be dynamically rearranged based on alphabetical sorting criteria.

No telephone handholding, no electronic mail or alphabetical indexing is available with the Personal Secretary. Only the 40 character editor is supported.

An upgrade certificate that allows you a \$50.00 credit toward purchase of The Executive Secretary is included.

**PRICE: \$100.00**

**TITLE: THE PROMPT-DOC**

**PUBLISHERS NAME: CONTEXT, INC.**

**HARDWARE REQUIREMENTS: Softcard 16K Card, 80 Column printer**

**DESCRIPTION:** A software program that prompts you through the process of planning, outlining, and writing a user manual and supplies boilerplate introductory and transitional text.

It allows you to:

1. Identify manual, select boilerplate chapter files from menu,



- review visual table of contents (VTOC) for chapters.
  2. Edit chapter VTOCs to tailor sequence and terminology to your product needs.
  3. Pause while computer modifies boilerplate chapters to match edited VTOCs and builds a skeletal manual in preformatted Wordstar files.
  4. Use Wordstar to edit the skeletal manual into a working draft, supplying product details as prompted.
  5. Tell computer to purge prompts and instructions from working draft, and build new Table of Contents; publish review draft.
  6. Review the draft for accuracy and usability; revise, polish, and publish as instructed by documentation.
- PRICE: \$245.00**

**TITLE: THE SENSIBLE SPELLER FACTS**

**PUBLISHERS NAME: SENSIBLE SOFTWARE**

**HARDWARE REQUIREMENTS: Two disk drives are required to delete words from or add words to the dictionary.**

**DESCRIPTION:** The SENSIBLE SPELLER is the first complete spelling verification program for the Apple II computer. It is designed to rapidly compare all of the words from a word processing file against a dictionary. The Sensible Speller quickly identifies "unknown" words and displays these words in the context in which they were used. You may then globally or individually mark these "unknown" words in the original document or add them to the dictionary of known words. Misspelled words may be listed, printed, marked in the document, or any combination of the three. Included in the Sensible Speller package is a copy of the Random House Dictionary- Concise Edition and two diskettes which contain all of the words in this dictionary. If you question the definition, pronunciation, or spelling of any word, you can simply look it up in the hard cover supplied dictionary.

Four versions of the Sensible Speller are presently available, including one that should meet your needs; included are a DOS 3.3, CP/M, Pascal, and a Super-Text version.

**SPECIFICATIONS:**

**COMPATIBLE WORD PROCESSORS:** Four different versions of the Sensible Speller are available; each tailored to a different operating system available on the Apple II computer. All versions use the same dictionary diskette, so if you need to use more than one version, you can still use your customized dictionary.

**DOS 3.3 Version:** Applewriter, Applewriter II, Apple Pie and Apple Pie 80 Column, Pie-Writer, The Correspondant, Executive Secretary, Letter Perfect, Magic Window, ScreenWriter II (Superscribe II), Text Editor, TXT/ED, Write-On and Word Power. The Sensible Speller will work with any word processor, editor, or program that generates standard DOS 3.3 Text or Binary files. The Sensible Speller does not work with Easywriter or Easywriter Pro.

**Super-Text Version:** Super-Text and Super-Text II. This version is also compatible with the new 80 column version of Muse's popular Super-Text.

**USER FRIENDLINESS:** One of the primary concerns in the design of the Sensible Speller was ease of use and multiple options to expand its usage. For example, if at any time, you want to abort the verification process, you need only press the "ESCAPE" key. Most questions have default answers, requiring only a "RETURN" to accept the default setup.

**DICTIONARY (version 3.0 or greater):** The supplied Main Dictionary diskette contains approximately 45,000 of the most common English language words and is expandable to approximately 55,000 words. The Supplementary Dictionary diskette contains the balance of all the words in the Concise Edition of the Random House Dictionary. This gives you a certified, well-known dictionary base of roughly

85,000 words. Documents may be checked against multiple dictionaries; there is no limit on how many dictionaries each document can be checked against. Multiple copies of the dictionary can easily be made; plus each copy can be customized (words added and deleted), two disk drive are required to modify the dictionary. Options are available to create empty dictionaries for specialized applications. Any section (or the entire dictionary) may be listed on the screen. In the near future, Sensible Software will be releasing well know legal and medical dictionaries to further enhance the power of this utility.

**SELECTING MISPELLED WORDS:** Two methods of selecting misspelled words are available. 1) Globally marking all words that are not in the dictionary. 2) A powerful in context verification. The document is scanned for the potential misspelled words and then they are displayed with several lines of the text immediately before and after each word, you are then requested to either have each word marked, added to the dictionary, or ignored. When a misspelled word is encountered you can even search the dictionary for the correct spelling using "wildcard" characters prior to taking any action with that word.

**HOW MISPELLED WORDS ARE MARKED:** Misspelled words are marked by replacing the last letter of the word with a special character. The default character is the circumflex, "^", but this may be changed to any other character you desire. After proofreading the document, you would use a word processor to search for and correct the misspelled words.

**OPTIONS:** A complete set of options are available to allow you to use the Sensible Speller to full advantage. Options include the ability to ignore printer control codes, formatting commands (two user specified prefix characters), list or print word usage and/or misspelled word usage.

**SPEED:** Average time to verify a 10 page document is 1 minute for no spelling mistakes or 2 minutes, 15 seconds for many mistakes. Shorter documents will take less time.

**DISK SWAPPING (EXCHANGING DISKS):** Two disk drive systems: To start the Sensible Speller, insert the program diskette and boot it. Insert dictionary with the document in drive 1. Additional documents may be proofread without exchanging any diskettes. Single drive systems: To start the Sensible Speller, insert the program diskette and boot it. Insert the diskette with the document and read the document. Insert dictionary and check spelling. Insert document diskette and mark misspelled words. Additional documents may be proofread following the same procedure.

**LIMITATIONS:** Words longer than 31 characters are truncated. Upper and lower case letters are not distinguished. The document cannot contain more than 2000 unique (different) words.

**PRICE: \$125.00**

**TITLE: THE WORD HANDLER**

**PUBLISHERS NAME: SILICON VALLEY SOFTWARE**

**DESCRIPTION:** The only word processor in the world for the Apple that:

- \* Gives you full line capability on the screen, no boards nec.

- \* Two character formats to choose from at all times!

Runs without any hardware modifications!

High power- Simplicity of operation!

Large scale- Direct to disk!

All functions seen on the screen!

- \* Lower and upper case underlining

- \* Superscript, bold, and unlimited tabs

- \* Proportional spacing

- \* Even and normal justification

**PRICE:**

**TITLE: THE WORD PLUS**

**PUBLISHERS NAME: OASIS SYSTEMS**

**DESCRIPTION:** The WORD PLUS has many features that SpellStar and many other competitors leave out. The WORD PLUS finds errors, shows them to you in context, and with your consent, automatically corrects them throughout the text. SpellStar does not correct errors.

**Versatile-** The WORD PLUS works with almost any CP/M based word processor. SpellStar only works with Wordstar.

**Accurate-** The WORD PLUS offers a 45,000 word vocabulary without the compromise of suffix stripping. SpellStar has only 20,000 words.

**Convenient-** The WORD PLUS helps you find the correct spelling by consulting its dictionary. SpellStar gives no such help.

**Fast-** The WORD PLUS proof reads 10,000 words of text in less than two minutes.

**Many Extra Features-** The WORD PLUS offers automatic hyphenation, text analysis, and fast word counting. Also solves crossword puzzles, locates anagrams and finds rhyming words.

A low cost for freedom from the anxiety of misspelling.

The WORD PLUS- Clearly the Best Choice.

**PRICE: \$150.00**

**TITLE: TXT/ED 2.0 (WORD PROCESSOR)**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION:** TXT/ED is a powerful word processing system. This word processor supports over 40 commands relating to entry of data, editing, disk input/output, data display and text formatting. Major features of TXT/ED 2.0 include: Full Right margin Justification, Selective saving of all or part of text Upper and Lower case (compatible with the paymar adapter), Merging of Multiple disk files, Global search and changes, Move line or paragraphs, Center line or paragraphs, Report generator and text formatting, Up to 9 tab stops for technical reporting, Exclusive editor status command, Creation of Apple Exec text files, Converts applesoft programs to text files for program editing and debugging, No embedded control characters, forward and backward scrolling, supports most printers. Text/ED is truly the Ultimate in Word Processing.

**PRICE: \$79.95**

**TITLE: VARIABLE MESSAGE**

**PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS**

**DESCRIPTION:** Very eye-catching, readable, lo-res message-marker! Up to 8 char/line X4 lines/page X3 pages/message. Any of 16 color letters on any of 16-color backgrounds. Background colors can be made to change continuously and even show "colored snowflakes". Vertical & horizontal centering is automatic. Messages can be saved to disk and instantly recalled.

**PRICE: \$20.00**

**TITLE: WORD POWER**

**PUBLISHERS NAME: SYSTEMS DESIGN LAB**

**DESCRIPTION:** WORD PROCESSING AND MAILING MANAGEMENT SYSTEM FOR APPLE COMPUTERS. This new business package developed by JERRY RIVERS features one of the most comprehensive Word Processing and Mailing Management Systems available. The word processor, called TEXT POWER, and the mailing system, called MAIL POWER, can be



used independently or linked together to make Form Letter Processing a reality. WORD POWER is compatible with the DAN PAYMAR Lower-Case adapter and the SUP'R' TERMINAL and VIDEOTERM 80 column boards. This complete business package is now available at your local dealer.  
**PRICE: \$99.95**

**TITLE: WORD PROCESSING**

**PUBLISHERS NAME: MPA ENTERPRISES**

**DESCRIPTION:** Uses include printing letters, reports, best sellers, and resumes. Will support insert and deletion. True lower case. The program will actively work on up to 16K of characters at a time. A separate print program allows for 80 column printers, single or double space, block or indented paragraphs, and right justification.

**PRICE: \$70.00**

**TITLE: WORD PROCESSING PROGRAM**

**PUBLISHERS NAME: RE/INTERNATIONAL SYSTEMS CORPORATION**

**DESCRIPTION:** The KISS\* Word Processor turns the KISS\* computer into a word processing system. It is now possible to write form letters or design office forms and save them on a disk for future use. Corrections are made with electronic ease, and the computer does the final typing.

**PRICE: \$100.00**

**TITLE: WORD PROCESSOR**

**PUBLISHERS NAME: COMPUTER SOLUTIONS**

**DESCRIPTION:** The software allows true upper/lower case on the APPLE, and its human engineering makes it quite different from other word processors presently available for the APPLE. Full mailmerge facilities are included in the system.

**PRICE: \$295.00**

**TITLE: WORD PROCESSOR**

**PUBLISHERS NAME: HOWARD SOFTWARE SERVICES**

**DESCRIPTION:** Includes deluxe features of expensive alternatives. True lower case display, forward and reverse scroll, character-by-character or block editing, multiple disk-linked editing & filing, right justify, center, full dynamic display & print control.

**PRICE: \$99.00**

**TITLE: WORD PROCESSOR II**

**PUBLISHERS NAME: MD PROCESSOR II**

**DESCRIPTION:** Word Processor II is a fast, professional machine language system that was created with compatibility in mind. It operates under Apple II DOS, and handles standard sequential text files including files that weren't even intended for "word processing"!

- \* Easily handles EXEC files and "captured" BASIC programs. Creates and uses standard ASCII sequential text files. Fast disk I/O is used to load text files faster than RLOAD speed.
- \* The Dan Paymar Lower Case Adaptor, 80 column cards, and remote terminals, can be used with this program without modification.
- \* Supports conditional text.
- \* You can play "fill in the blanks" with ease with Form Letter. Ideal for generating form letters, standard legal documents,



etc.

- \* Mailing list feature allows merging of mailing list file into form letter for bulk printing of letters or customized advertisements.
- \* Absolute or relative left and right margin setting, positive and negative indentation, top and bottom titles, which include user-defined page numbering format and spacing from body of text, centering, left and/or right justify, fill and/or justify, auto-paragraph, test page, tabs and tab stop setting, line spacing, page number setting, and more are included commands.

The text editor included in this system is capable of fully independent operation. Containing both line and character oriented commands, it includes rapid search, insert, delete, change, save/unsave to move or copy text, multiple file input, user-defined commands, and a Macro feature that is much more flexible than a mere search-and-replace function. (Extremely similar to Digital Equipment Corporation's popular RT-11 EDIT).

PRICE: \$75.00

#### TITLE: WORDPOWER

PUBLISHERS NAME: CONNECTICUT INFORMATION SYSTEMS

DESCRIPTION: Wordpower is a simple, powerful, low cost, line oriented word-processor program. It offers a fast machine language FIND & REPLACE. Text can be listed to screen or printer, with or without line-numbers. Lower-case adaptors are supported. You can merge files, move groups of lines and easily add, change, or delete lines. Wordpower can be used to create and maintain EXEC files. It can also be used as a rapid, unstructured information storage and retrieval system via its rapid search capabilities.

PRICE: \$50.00

#### TITLE: ZARDAX - THE APPLE II WORD PROCESSOR

PUBLISHERS NAME: COMPUTER SOLUTIONS OF AUSTRALIA

DESCRIPTION: Zardax, the word processor that concentrates on "human engineering" for a perfect fit into the business or professional environment. Secretaries and non-computerists learn it quickly and love it. It does form letters, contracts, and mailing lists, in addition to long reports. This page shows ZARDAX in action.

Here are some of its features:

1. Human engineering: designed for the user, not just for computer experts. Control commands are easy to remember. No "mode" switching. Menus for disk access and printing. Users can learn it and produce quickly.
2. Full upper and lower case, controlled the way typists expect: the shift key shifts, CTRL shift locks, shift (again) unlocks. Gives audible feedback of lock and unlock. All ASCII characters are available.
3. The same program may be used for 40 column Apples (using HI-RES, with onscreen underlining, no lower case chip required), or with the Vision-80, Doublevision, Smarterm, or Videx 80 column boards.
4. Fast disk access using standard 3.3 text files; can access text files written by other programs. Output to disk for links to spelling programs.
5. A GLOSSARY feature: for fast entry of frequently-used phrases or printer control sequences. E.g. CTRL - G S can be defined to enter "Sincerely yours," several blank lines, and your name.
6. Easy formatting to a variety of printers: width, margins,

hanging indent, justification, output of any escape or control sequence the printer needs, single or continuous sheets, multiple copies sheets, multiple copies. Supports double width, emphasized characters, etc. for dot matrix printers such as the Epson. With daisy-wheel printers it will of microspace justification (as in this paragraph) subscripts and super scripts, overstrike, red/black ribbon, in single 1-1/2 and double spacing, and pitch change.

7. Full mail-merge facilities for form letters, insertion of common entries (e.g., name, address, "contract price")
8. A-R N provides set-up and application help to users and dealers.

**PRICE: \$295.00**

# INTERNATIONAL APPLE CORE MEMBER CLUB ROSTER

## AUSTRALIA

### ACTAPPLE

Peter Bray, Pres.  
33 Scarlett St.  
Melba, ACT, Australia 2615  
Tel: 889352

### COMPUTER EDUCATION GROUP OF NSW

Steve Holborow, Pres.  
P.O. Box 148  
Sydney, NSW, Australia 2007  
Tel: 857467

### EMU

Ian Webster, Coord.  
Box 3143, GPO  
Sydney, NSW, Australia 2001  
Tel: 02-43-4826

### APPLE USERS GROUP

Peter Kazakos, Treas.  
8 Leemon Street  
Condell Park, NSW, Australia 2200

### APPLE TURNOVER

Karl Homes, Barabba School  
West Street  
Barabba, NSW, Australia 2347

### ILLAWARRA APPLE CORE

John Fisher, Pres.  
3 Edward Street  
Wollongong, NSW, Australia 2500  
Tel: 042-673003

### LOGOS FOUNDATION

John Hunter, Pres.  
Box 100 Thirroul Ave.  
Blackheath, NSW, Australia 2785

### W.A.U.G.

Dr. Patrick Lip, Pres.  
P.O. Box 19  
Wandai, Queensland, Australia 4606  
Tel: 074-9922-84

### S. AUSTRALIAN APPLE USERS CLUB

David Mooney, Sec'y.  
c/o The Bookshelf 169 Pirie St.  
Adelaide, So. Australia 5000

### TAS APPLE USERS CLUB

P.O. Box 188  
North Hobart, Tasmania, Australia 7000

### OBERON HIGH SCHOOL

Graham Travers, Pres.  
P.O. Box 252  
Belmont, Victoria, Australia 3216

MELBOURNE APPLE COMPUTER IN EDUCATION  
Denis Kennedy  
Hadfield High School  
Pascoe Vale, Victoria, Australia 3064  
Tel: 306-2788

MICOM  
Stephen Dart, Pres.  
P.O. Box 60  
Canterbury, Victoria, Australia 3126  
Tel: 03-509-9729

PARA-QUAD COMPUTER CLUB  
Donald Pugh, Pres.  
Quad Centre, Selby St.  
Shelton Park, S.A., Australia 6008

APPLE USERS CLUB WESTERN AUSTRALIA  
Tim Russel, Pres.  
269 Marmion St.  
Cottlesloe, W.A., Australia 6011  
Tel: 09-457-1555

#### **AUSTRIA**

APPLE USER CLUB AUSTRIA  
M. Weissenboeck, Pres.  
P.O. Box 51  
A-1181 Wien, Austria 0  
Tel: 01143-222-476216

#### **BELGIUM**

Apple Gebruikers Groep  
c/o Louis van Geel  
Vaartlan 35A  
St. Job-In't-Goor B-2128  
Belgium

#### **BRAZIL**

**BRAZIL APPLE CLUBE**  
Dr. Luiz E. Pellanda, Pres.  
Rua Maestro Pena 90  
Porto Allegre, Brazil 90 000  
Tel: 0512-23-0577

#### **CANADA**

APPLE BRITISH COLUMBIA  
Gary Little, Pres.  
#316-8055 Anderson Rd.  
Richmond, B.C., Canada V6Y 1S2  
Tel: (604) 273-1277

BOARD OF EDUCATION - HAMILTON  
Dave Didur  
P.O. Box 558  
Hamilton, Ontario, Canada  
Tel: (416) 527-5092



SCARBOROUGH EDUC. COMP. SOCIETY  
Breadner - Program Dep't.  
140 Borough Dr.  
Scarborough, Ontario, Canada M1P 4N6

BISHOP STRACHAN SCHOOL  
Mrs. Ketchum  
298 Lonsdale Rd.  
Toronto, Ontario, Canada M4V 1X2

APPLE-CAN  
Louis H. Milrad, Pres.  
P.O. Box 696 Station B  
Willowdale, Ontario, Canada M2K 2P9  
Tel: (416)223-0599

CLUB APPLE DE LA MAURICIE  
Pierre-Paul Thibeault, Treas.  
400 Tourigny  
Trois-Rivieres, Quebec, Canada G9A 3E4

BOLO/UB APPLE CLUB  
Pierre Beaudin, Pres.  
1208 Patenaude #3  
Laval, Quebec, Canada H76 3H2  
Tel: (514)663-2771

CLUB APPLE DE MONTREAL  
Gabriel Juteau, Sec'y.  
32 Avenue Des Erables  
St. Therese DE Bl, Quebec, Canada J7E 3T4  
Tel: (514)435-3204

CLUB DE MICRO-ORDINATEUR ST. JEAN  
Ronald Leger, Sec'y.  
P.O. Box 21  
St. Jean, Quebec, Canada J3B 6Z1

COLLEGE PARK SCHOOL  
A.J. Allen  
3440 Harrington St.  
Saskatoon, Saskatchewan, Canada S7J 1V6

SASK-APPLE RESEARCH GROUP  
Kelvin Chu, Pres.  
P.O. Box 291 Sub P.O. #6  
Saskatoon, Saskatchewan, Canada, S7N 0W0

#### COLOMBIA

GRUPO USARIOS APPLE DE COLOMBIA  
Jorge Ladron de Guevara  
A.A 91226  
Bogota, Colombia  
Tel: 249-71-85

#### DENMARK

FPBM APPLE KREDSSEN  
Torkil Olesen  
Dag Hammaskjolds Alle 30  
Copenhagen, Denmark DK 2100  
Tel: 451-26-17-71

## ENGLAND

OXFORD POLYTECHNIC  
Brian Clark - Math Dep't.  
Headington  
Oxford, England OX3 0BP

BRITISH APPLE SYSTEMS USER GROUP  
John Sharp, Chair  
P.O. Box 174  
Watford, England WD2 6NF  
Tel: 09273-75093

MIDDLESEX MED SCH APPLE CLUB  
Prof. J.F. Tait, Pres.  
Cleveland St. - Physics Dep't.  
London, England W1P 6DB  
Tel: 01-636-8333

## FINLAND

TERO SAND  
Auroran Sairaala Osasto 8/2  
Nordenskioldenkatu 20  
00250 Helsinki 25  
Finland

## FRANCE

MICRO MEDICAL COMP. CLUB  
J. Kertesz  
25 Rue Mont Cenis  
Paris 75018, France  
Tel: 1-264-0232

## GERMANY (Federal Republic)

APPLE USER GROUP EUROPE  
Klaus Giese, Pres.  
Hiltroper Landwehr 8  
4630 Bochum 4, West Germany  
Tel: 0234/861410

APPLE CLUB FRANKFURT  
Lothar Rockstroh, Pres.  
Schweizer Str. 92  
Frankfurt/M.70, West Germany D-6000  
Tel: (0611)-61-45-12

APPLE CLUB ROEDINGHAUSEN  
Axel Vogt, Pres.  
Wehmerhorster.110  
Roedinghausen, West Germany D-4986

## HONG KONG

HONG KONG APPLE  
c/o Delta Communication  
15 Cumberland Road, Rear  
Kowloon Tong, Hong Kong

HONG KONG APPLE DRAGON  
Robert Gliss  
101 Fu House, 7 Ice House St.  
Hong Kong  
Tel: 5-210295-8

#### INDONESIA

JAKARTA APPLE CORE  
International School Computer Dep't.  
P.O. Box 79/KBT  
Jakarta Selatan, Indonesia

#### IRELAND

COLLEGE OF MARKETING  
Diarmuid McCarthy  
18 Parnell Square  
Dublin 1, Ireland  
Tel: 01-742721

APPLE USERS - DUBLIN  
Simon Stewart, Pres.  
37 Harcourt St.  
Dublin 2, Ireland  
Tel: 751484

COMPUTER EDUCATION SOC. OF IRELAND  
Michael Moynihan, Pres.  
Leemount, Co. Cork, Ireland  
Tel: (021)80362

#### ITALY

MELA-MANIA APPLE USER CLUB  
Marco Bramucci, Pres.  
Capello Via Monte Pelago 2  
Ancona, Italy 60100  
Tel: 071/948892

#### JAPAN

DEPARTMENT OF ORTHOPEDIC SURGERY  
Takatoshi Ide-Kurume U. Sch. Medicine  
1167 Asahi-Machi, Kurume  
Fukouka, Japan

BAKED APPLE  
K. Yamada  
Koshei Hsp. 5-Chome 2-7  
Tachibana, Sumida Ku  
Tokyo, 131 Japan

APPLE BUGS  
Toshikazu Yamashita  
20-29 Banchi Yamate-Cho 1 Chome  
Suita City, Osaka, Japan

## **MALAYSIA**

APPLE ORCHARD  
T. Lee  
Taman Maluri  
Batu 3, Jalan Chera  
Kuala Lumpur, Malaysia

## **NEPAL**

APPLE USERS  
c/o Gerold V. Van Der Vlugt, M.D.  
Kathmandu (ID)  
Department of State  
Washington, DC 20520

## **NETHERLANDS**

APPLE GROEP NEDERLAND  
p/a J.P. Haas, Sec'y.  
Bergselaan 145A  
Rotterdam, Netherlands

## **NEW ZEALAND**

ELECTRIC APPLE  
Brian D. Strong, Pres.  
P.O. Box 3476  
Wellington, New Zealand  
Tel: (04)720432

NZ GROUP OF APPLE USERS  
T. Stallknecht, Pres.  
90 Washington Ave.  
Brooklyn 2, New Zealand  
Tel: 894800

## **PHILLIPINES**

APPLE P.I.  
Benjamin S. Jalandoni  
3rd Floor, Liberty Bldg., Pasay Rd.  
Makati/Mmanila, Phillipines 3116  
Tel: 88-70-36

## **POLAND**

LECH WALESIA APPLE CLUB  
Piotr Flatau  
Pasteura 7  
Warsaw, Poland 02083

## **SCOTLAND**

APPLE - EDEN  
Colin O'Hara, Pres.  
49 Monreith Road, Newlands  
Glasgow, Scotland G43 2NZ



## **SINGAPORE**

SINGAPORE MICRO SOCIETY  
David Steele  
105 Admiralty Rd. West  
Singapore 2775  
Tel: 2574788

## **SOUTH AFRICA**

CAPE APPLE CORPS  
Bob Denton, Pres.  
Box 170 Claremont  
Cape Town, South Africa  
Tel: 21-431010

TAC2 APPLE USERS GROUP  
Harry Brindley, Sec'y.  
P.O. Box 87421  
Houghton, South Africa 2041

## **SPAIN**

CATALUNYA APPLE CLUB  
Sr. Rife Uriol, Pres.  
Fabra y Puig 389 E/4  
Barcelona-31, Spain  
Tel: 254-7909

## **SWEDEN**

APPLE USERS GROUP SWEDEN  
Johan Nilson  
P.O. Box 2039  
S-200 12 Malmo  
Sweden

## **SWITZERLAND**

MICROCLUB  
C. Eberhard, Fin. Mgr.  
A. Rte. Villeret 48  
St. Imier, Switzerland CH 2610

## **TAIWAN**

TAIWAN APPLE GROUP  
Chang Chien-Lin  
P.O. Box 96-214  
Taipei, Taiwan ROC  
Tel: 20-11-1981

## **VENEZUELA**

APPLE USERS OF PARAGUANA  
Gary Menszyk  
G. Sanderson-c/o Lagoven S.A. Apt. 47  
Judibana; Falcon, Venezuela 4147A  
Tel: 58-69-51601

## YUGOSLAVIA

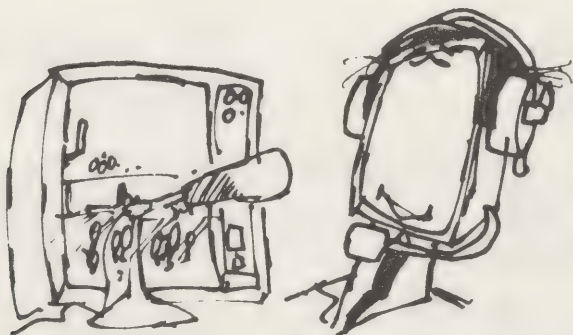
APPLE CLUB ZAGREB  
Zeljko Lalic, Dipl. Ing.  
Ruzmarinka 5, 41000  
Zagreb, Yugoslavia 0

## APO/FPO

THULE APPLE COMPUTER OWNERS SOCIETY  
Barry Russel, Pres.  
c/o AFSCF DET 3  
APO NY 09023

MONTGOMERY LEE  
Manzana, Panama  
PSC Box 2391  
APO Miami, FL 34001

F E T C H  
Charles E. Cook, MNC  
Naval Air Facility Box 13  
FPO Seattle, WA 98767



## UNITED STATES OF AMERICA

### Alabama

APPLE CORPS OF BIRMINGHAM  
Jim Rogers, Pres.  
P.O. Box 3321-A  
Birmingham, AL 35255  
Tel: 205-942-7006

NEWTON'S TREE APPLE USER GROUP  
Frank H. Emens, Pres.  
3714 Lakewood Circle  
Huntsville, AL 35811  
Tel: 205-852-0537

### Arkansas

LITTLE ROCK ASPPLE ADDICTS  
Randy Irwin, Pres.  
P.O. Box 55215 Hillcrest Sta.  
Little Rock, AR 72205  
Tel: 501-374-1770

### Arizona

APPLE C.A.R.T.  
Warren Michelsen, Pres.  
P.O. Box 2361  
Page, AZ 86040  
Tel: 602-645-2141

MOUNTAIN VIEW APPLE USERS GROUP  
Joseph J. Cracchiolo, Pres.  
1923 Violas Drive  
Sierra Vista, AZ 85635  
Tel: 602-458-2332

TUCSON APPLE USERS GROUP  
Dan Davidson, LCS  
Pima College-2202 W. Anklam Rd.  
Tucson, AZ 85709  
Tel: 602-884-6000

### California

HFEA APPLE COMPUTER USERS GROUP  
Don Andert, Pres.  
417 Meadowbrook Place  
Anaheim, CA 92801  
Tel: 714-776-6384

APPLE BUG  
Gary Atchinson, Pres.  
4509 Millbrook Way  
Bakersfield, CA 93309  
Tel: 805-831-7723

APPLE TREE  
Daniel Weisenstein, Pres.  
781 W. Hamilton Ave.  
Campbell, CA 95008

WEST ALABAMA USERS  
Barry Collins, Pres.  
1009 W. Jackson St.  
Demopolis, AL 36732  
Tel: 205-289-0439

QUAD CITIES APPLE BYTERS  
Peter A. Eckhoff, Pres.  
129 E. Oak Hill Drive  
Florence, AL 35630

ADAM-II  
Steve Alexander, Pres.  
P.O. Box 34056  
Phoenix, AZ 85206  
Tel: 602-991-8393

GILA VALLEY APPLE GROWERS ASS'N.  
Don Lancaster, c/o Synergistics  
P.O. Box 1077  
Thatcher, AZ 85552  
Tel: 602-428-4073

PLACER COUNTY ED. FILM CEN.  
1228 High Street  
Auburn, CA 95603

LERC ACES  
Rod White, Sec'y.  
P.O. Box 551  
Burbank, CA 91520  
Tel: 213-847-3013

TRI-NETWORK APPLE USERS GROUP  
Jeff Mazur, Pres.  
8041 Sadring  
Canoga Park, CA 91304  
Tel: 213-992-4993

AEROSPACE APPLE USER GROUP  
Dwight U. Phillips, Pres.  
28901 Lotusgarden Dr.  
Canyon Country, CA 91351  
Tel: 805-251-1516

ABACUS USER GROUP  
Ed Avelar, Pres.  
2850 Jennifer Drive  
Castro Valley, CA 94546  
Tel: 415-538-2431

APPLE PEELERS  
Gene Wilson, Pres.  
1650 Pine Apt. N-1  
Concord, CA 94520

APPLE/VALLEY COMPUTER CLUB  
John Stankiewicz, Pres.  
4900 Newcastle  
Encino, CA 91316  
Tel: 213-345-8507

NORTH COUNTY COMPUTER CLUB  
Allen Chaikin  
274 Morro Hills Rd.  
Fallbrook, CA 92028  
Tel: 714-728-7809

NORTH ORANGE COMPUTER CLUB  
Bob Brown  
11121 Binedale  
Garden Grove, CA 92641  
Tel: 714-539-1829

HI DESERT APPLE COMPUTER CLUB  
David P. Weaver, Pres.  
P.O. Box 2702  
Lancaster, CA 93539  
Tel: 805-277-5584

L.A. APPLE USERS GROUP  
Philip Wasson, Pres.  
9513 Hindry Pl.  
Los Angeles, CA 90045  
Tel: 213-649-1428

S.P.A.C.E.  
Roger Chaffee  
P.O. Box 7495  
Menlo Park, CA 94025

ORANGE APPLE COMP. CLUB  
Kenneth Cohn, Pres.  
23767 Calle Azorin  
Mission Viejo, CA 92692  
Tel: 714-770-8843

HESEA APPLE COMPUTER CLUB  
Bud Grove, Pres.  
21111 Dolores #146  
Carson, CA 90745  
Tel: 213-549-9664

APPLE FOR THE TEACHER  
Ted Perry, Pres.  
2331 Rainbow Ave.  
Sacramento, CA 95821

EAST VALLEY APPLE CLUB  
William Noel, Sec'y.  
2267 Pine Valley Ave.  
Ontario, 91761  
Tel: 714-947-0270

APPLE SAC  
Ken Gray, Pres.  
P.O. Box 874  
Fair Oaks, CA 95628  
Tel: 916-671-0230

MCDONNELL DOUGLAS ASTRO APPLE GROUP  
Larry E. Teselle, Pres.  
16681 Mt. Darwin Circle  
Fountain Valley, CA 92708  
Tel: 714-896-4717

RIDGECREST APPLE GROUP  
Glen Thomas, Pres.  
Star Rt. Box 109E  
Inyokern, CA 93527

ORIGINAL APPLE CORE  
Elroy Wieck  
P.O. Box 91182  
Los Angeles, CA 90009  
Tel: 213-676-3531

UCLA APPLE USERS GROUP  
Stuart Levine  
7533 Lexington Ave. #301  
Los Angeles, Ca 90009

JPL COMPUTER/APPLE CLUB  
H. Lowell Smith, Pres.  
24575 Spartan St.  
Mission Viejo, CA 92691  
Tel: 213-354-6119

CSUN APPLE USERS  
Computer Science Dep't.  
1811 Nordhoff St.  
Northridge, CA 91330  
Tel: 213-885-2799



#### TRWAUG

Kim R. Schuette  
c/o TRW-DSSG  
One Space Park; 92/1318  
Redondo Beach, CA 90278  
Tel: 213-535-4521

#### APPLE CORPS OF SAN DIEGO

Paul McKinney, Sec'y.  
P.O. Box 23128  
San Diego, CA 92123  
Tel: 714-571-2981

#### SAN FRANCISCO APPLE CORE

Fred Wilkinson  
1515 Sloat Blvd.  
San Francisco, CA 94132  
Tel: 415-556-2342

#### SANTA BARBARA APPLE USERS GROUP

Ed Adams, Pres.  
2007 State St.  
Santa Barbara, CA 93105  
Tel: 805-963-1325

#### SANTA CRUZ APPLE GROUP

Jim McCaig, Pres.  
P.O. Box 1428  
Santa Cruz, CA 95061  
Tel: 408-335-8750

#### APPLE-SMUG

Daniel A. Dresner, Pres.  
34 Villanova Ct.  
Seaside, CA 93955  
Tel: 408-394-2648

#### SOUTH BAY APPLES COMPUTER CLUB

Frank Jedziniak, Pres.  
P.O. Box 5201  
Torrance, CA 90510  
Tel: 213-539-1200

#### S.M.A.L. APPLE

Ronald Stankiewicz  
1114 Cypress  
Vandenberg AFB, CA 93437  
Tel: 805-925-6675

#### APPLE CREEK

Henry Couden  
1815 Ygnacio Valley Rd.  
Walnut Creek, CA 94598  
Tel: 415-935-6502

#### Colorado

#### APPLE PI USERS GROUP

Dan Minardi, Pres.  
P.O. Box 17467  
Denver, CO 80217  
Tel: 303-429-4436

#### APPLE JACKS

Marvin Kosmal, Pres.  
P.O. Box 2022-A  
San Bernardino, CA 92406

#### SAN DIEGO MEDICAL APPLE USERS GROUP

Joel Kunin, MD, Pres.  
7920 Frost St., Suite 405  
San Diego, CA 92123  
Tel: 714-279-5253

#### BLOSSUM VALLEY APPLE CLUB

Ernest Webb, Pres.  
5821 Cottle Road  
San Jose, CA 95123  
Tel: 408-578-2815

#### APPLE P.I.E.

Bill Nienhaus, Pres.  
337 Montclair  
Santa Clara, CA 95051  
Tel: 408-247-6470

#### SOURCE APPLE USERS GROUP

Joel L. Amronin, Treas.  
2525 Beverly Ave. #9  
Santa Monica, CA 90405  
Tel: 213-396-8668

#### APPLE PI

Marion Clarke  
171 E. Thousand Oaks Blvd. Ste 104  
Thousand Oaks, CA 91360  
Tel: 805-495-3554

#### MIDWAY COMPUTER CLUB

131 Highland Ave.  
Vacaville, CA 95688  
Tel: 707-446-3175

#### APLEHOLICS ANONYMOUS

Don Wilson  
c/o Byte Shop, 155 Morse Ave.  
Ventura, CA 93003  
Tel: 805-647-8945

#### APPLE MUG

Larry L. Stoneburner, MD, Pres.  
280 Hospital Circle #202  
Westminster, CA 92683

#### ROCKY APPLE CORE

Cyrus Wood, Pres.  
141 E. Elkhorn Ave.  
Estes Park, CO 80517  
Tel: 303-586-5737

## **SOUTH COLORADO APPLE USERS**

Tom Thomas, Pres.  
1635 S. Prarie  
Pueblo, CO 81005  
Tel: 303-564-3545

## **Connecticut**

### **APPLEFIELD USERS GROUP**

Marc Lillie, VP  
1700 Post Road  
Fairfield, CT 06430  
Tel: 203-255-3650

### **APPLELIST**

Joseph Cohen, Sec'y.  
50 Ida Lane  
W. Haven, CT 06516  
Tel: 203-397-1407

### **APPLE MUGS**

Eric Strassman, Pres.  
345 Main St.  
Norwalk, CT 06851  
Tel: 203-846-4198

### **APPLESHARE**

Jack Adinolfi, Pres.  
1439 Post Road East  
Westport, CT 06880  
Tel: 203-227-6854

## **Delaware**

### **G R A P E**

Frank Weinberg, Pres.  
P.O. Box 8904  
Newark, DE 19711  
Tel: 302-738-6365

## **Florida**

### **CAPEAPPLE**

John McNally  
1661 Crooked Arrow Ct.  
Cape Coral, FL 33904  
Tel: 813-542-5645

### **A.C.E.S.**

Don Lehmebeck, Pres.  
P.O. Box 9222  
Coral Springs, FL 33065  
Tel: 305-941-7252

### **APPLE JAX**

Ed Dunn, Pres.  
1021 King St.  
Jacksonville, FL 32204

### **APPLE USERS CORE**

Pete Seals  
307 Tarpon Rd.  
Mary Esther, FL 32569  
Tel: 305-581-0002

### **MIAMI APPLE USERS GROUP**

Paul Barzler, Sec.  
P.O. Box 161240  
Miami, FL 33116  
Tel: 305-595-8728

### **SPACE COAST APPLE USER GROUP**

Billy M. Washam, Pres.  
P.O. Box 4332  
Patrick AFB, FL 32925

### **S C A T**

Sandy Bernstein, Pres.  
P.O. Box 7488  
Clearwater, FL 33518  
Tel: 813-961-5705

### **SW FLORIDA APPLE USERS**

Steven Bernstein, MD  
5673 S. Tamiami Trail  
Fort Myers, FL 33907  
Tel: 813-332-2140

### **APPLE TREE OF CENTRAL FLORIDA**

Glen Gayle  
530 Wind Meadow  
Altamont Springs, FL 32701

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Tony R. Marshall, Pres.  
P.O. Box 327  
Melbourne, FL 32901  
Tel: 305-725-4328

### **S M A U G**

Phil Mitchell, Pres.  
10201 Fontainebleu Blvd. #206  
Miami, FL 33172  
Tel: 305-551-1000

### **SUN COAST TAMPA APPLE**

Fred Reitberger, Pres.  
22 Chinook Ct.  
MacDill AFB, FL 33621

BAUDHAUS  
School of Architecture  
FAMU P.O. Box 597  
Tallahassee, FL 32307

VENICE APPLE  
Rod Vetter, Treas.  
P.O. Box 421  
Venice, FL 33595

## Georgia

ATLANTA SOC. OF PROF. APPLE USERS  
Jerry Long, Pres.  
6600 Powers Ferry Rd., Suite 220  
Atlanta, GA 30339  
Tel: 404-955-2663

AUGUSTA APPLE USERS GROUP  
George Nichols, Pres.  
1224 Johns Rd.  
Augusta, GA 30904  
Tel: 404-733-3562

## S E A

Andy Morton, Pres.  
3258 Powers Ferry Rd.  
Marietta, GA 30067  
Tel: 404-977-8600

## Hawaii

M A U I  
Lee Shuck, Pres.  
37 Makalani Pl.  
Makawao, HI 96768  
Tel: 808-879-7957

H.A.U.S.  
Glen Osmond, Pres.  
720 Elm Drive  
Pearl City, HI 96782  
Tel: 808-456-4068

## Idaho

A.B.U.G.  
Tom Stamm, Sec'y.  
2213 Targee #5  
Boise, ID 83705  
Tel: 208-336-1534

P.I.N.E. APPLES  
Hugh Tucker, Sec'y.  
1855 Jean St.  
Pocatello, ID 83201

## Illinois

CRAB-APPLES  
Robert F. Gonsowski, Pres.  
P.O. Box 437  
DeSoto, IL 62924

PLATO CENTER APPLE USERS GROUP  
William Swanson, Pres.  
Rt. 2, Box 189  
Elgin, IL 60120  
Tel: 312-464-5893

APPLE USERS - NU  
Colin Graham  
Mathematics Dep't.  
Northwestern University  
Evanston, IL 60201  
Tel: 312-492-5571

SUPAGE COUNTY APPLE USERS  
Earl Allen, Pres.  
1241 Citation Lane  
Hanover Park, IL 60103  
Tel: 312-837-9259

D.A.T.A.  
John Paustek, Treas.  
5048 Pebble Creek Trail  
Loves Park, IL 61111  
Tel: 815-633-1569

N I A U G  
Michael L. Robins, VP  
P.O. Box 787  
Palatine, IL 60067  
Tel: 312-593-2709

CENTRAL ILLINOIS APPLE  
Gary Benway, Pres.  
P.O. Box 1462  
Peoria, IL 61604  
Tel: 309-444-9705

CHAMPAIGN-URBANA APPLE USERS GROUP  
Sidney A. Bowhill, Pres.  
2203 Anderson  
Urbana, IL 61801  
Tel: 217-333-4150

## APPLE PI COMPUTER CLUB

Jack Gratz, Pres.  
11630 S. Nagle Ave.  
Worth, IL 60482  
Tel: 312-448-6548

## Indiana

### INDIANAPLUS

John Lombardi, Sec'y.  
221 W. Dodds St.  
Bloomington, IN 47401  
FT. WAYNE APPLE COMP. USER GROUP  
Joe Kucharski, Pres.  
3833 Foresthill Ave.  
Fort Wayne, IN 46805  
Tel: 219-485-3388

### APPLE TECH

Michael A. Miller, Pres.  
1755 Linden Ave.  
Mishawaka, IN 46544

## Iowa

### AMES APPLE USERS GROUP

Bob Kelly, Pres.  
c/o Beacon Elect.  
213 Lincoln Way  
Ames, IA 50010  
Tel: 515-292-9318

### CEDAR RAPIDS APPLE USERS GROUP

Pete Tillman, Pres.  
417 Third Ave.  
Cedar Rapids, IA 52404  
Tel: 319-366-6327

### IOWA CITY APPLE USERS GROUP

Dave Thomas, Pres.  
134 Ravencrest Dr.  
Iowa City, IA 52240  
Tel: 319-353-3170

### AGRI-CURSRS

Neal Stadlman  
c/o Sac City State Bank  
500 Audobon  
Sac City, IA 50583  
Tel: 712-662-4721

## Kansas

### APPLE BITS

Robert K. Mills, Rep.  
6140 Glenwood  
Mission, KS 66202  
Tel: 913-236-8679

### TOPEKA APPLE USERS CLUB

Candy Smucker, Treas.  
911A SW 37th St.  
Topeka, KS 66611  
Tel: 913-267-6530

### C A U G

Charles Hatcher, Pres.  
2805 Chestnut Ct.  
Columbus, IN 47201  
THE APPLE PICKERS, INC.  
Larry Hanger, Pres.  
P.O. Box 20136  
Indianapolis, IN 46220  
Tel: 317-357-8781

### WABASH VALLEY APPLE BYTERS

Bernard Ridens  
RR 21, Box 191  
Terre Haute, IN 47802

### TEH GREEN APPLES

Tom Jacobsen, Pres.  
4417 N. Zircon Ln. Lot 129  
Cedar Falls, IA 50613  
Tel: 319-268-0572

### TRI-STATE MICROCOMPUTER

James Gruber  
2866 Brueck Rd.  
Dubuque, IA 52001  
Tel: 319-583-9502

### I/OWA CITY APPLE GROUP

Joann Short, Sec'y.  
844 10th N.E.  
Mason City, IA 50401

### SIOUX-APPLE

A. Kleider  
28 W. Kings Highway  
Sioux City, IA 51104

### APPLEBUTTER

Michael Frame, Pres.  
10049 Santa Fe Dr.  
Overland Park, KS 66212  
Tel: 913-884-8529

### PLANE APPLE CLUB

John Van Walleghen, Pres.  
P.O. Box 12013  
Wichita, KS 67277  
Tel: 316-522-8410



## Kentucky

### APPLE-SIDERS

Gary Johnston, Pres.  
27 Crystal Lake Dr.  
Covington, KY 41017  
Tel: 606-356-7185

### L.A.U.G.H.S.

Dr. Michael Finn  
8207 Pipilo  
Louisville, KY 40222  
Tel: 502-426-3815

## Louisiana

### CRESCENT CITY APPLE CORE

John Downing, Pres.  
72 Old Hickory Ave.  
Chalmette, LA 70043  
Tel: 504-246-8438

## Maryland

### MARYLAND APPLE CORPS

Art Blumberg, Sec'y.  
6711 Greenspring Ave.  
Baltimore, MD 21209  
Tel: 301-486-2580

### WASHINGTON APPLE PI

David Morganstein, Pres.  
P.O. Box 34511  
Bethesda, MD 20817  
Tel: 202-332-9102

### MARYLAND CRABAPPLES

c/ Logical Choice  
Chatham Mall  
Ellicott City, MD 21043  
Tel: 301-242-0658

### PENCOM

John A. Pence, Pres.  
222 Key Highway  
Frederick, MD 21701  
Tel: 301-662-1997

### APL APPLE USERS GROUP

Edward Davis, Treas.  
Johns Hopkins Appl. Physics  
Laurel, MD 20707  
Tel: 301-953-7100 x3704

## Massachusetts

### APPLE/BOSTON

3 Center Plaza  
Boston, MA 02108  
Tel: 617-367-8080

### APPLESAUCE

Leon A. Osborne, Pres.  
118 Brookhaven Dr.  
East Longmeadow, MA 01028

### NEWTON APPLE KIDS

Raines Cohen  
50 Court St.  
Newtonville, MA 02160  
Tel: 617-965-0033

### APPLE CORE OF BERKSHIRE COUNTY

Scott Rodman, Pres.  
32 Deborah Ave.  
Pittsfield, MA 01201  
Tel: 413-442-4759

### NORTH SHORE APPLE GROUP

Robert E. Ramsdell, Pres.  
P.O. Box 59  
Rockport, MA 01966  
Tel: 617-546-7869

### APPLESEED

Jared M. Spool, Pres.  
4 Cranebrook  
Shrewsbury, MA 01545  
Tel: 617-842-7198

### APPLE GUILD

Richard Boehmer, VP  
P.O. Box 371  
Weymouth, MA 02188  
Tel: 617-335-3701

### N.E.A.T.

Lori Steinmetz, Pres.  
P.O. Box 2652  
Woburn, MA 02155  
Tel: 617-767-1722

## Michigan

ANN ARBOR APPLE  
Steve Opal, Ed.  
P.O. Box 2386  
Ann Arbor, MI 48106

APPLE CORE EXAMINERS  
Mark Turmell, Pres.  
4691 S. Elm Dr.  
Bay City, MI 48706  
Tel: 517-684-9189

K.A.C.U.S.  
P. Crone  
517 Oak  
Kalamazoo, Mi 49007

GRAND RAPIDS APPLE  
Tim Hartley, Sec'y.  
3268 Coach Lane #2A  
Grand Rapids, MI 49508

APPLE L.U.G.  
Dale Marshall, VP  
5411 Marsh Rd.  
Haslett, MI 48840  
Tel: 517-349-4671

MICHIGAN APPLE COMPUTER CLUB  
Roger Tuttleman, Pres..  
P.O. Box 551  
Madison Heights, MI 48071  
Tel: 313-353-7648

## Minnesota

MINI'APP'LES  
Daniel Buchler, Pres.  
13516 Grand Ave. S.  
Burnsville, MN 55337  
Tel: 612-890-5051

MAYO APPLE USERS GROUP  
A.E. Pertuz, Treas.  
Mayo Clinic- S&P  
Rochester, MN 55901  
Tel: 507-289-4323

PERSONAL COMP. INTEREST GROUP  
Recreation Services  
3602 Hwy 52 North  
Rochester, MN 55901  
Tel: 507-289-4323

## Missouri

A.M.M.P.L.E.  
Allen Hahn, Pres.  
333 E. Winter  
Columbia, MO 65201  
Tel: 314-443-0689

APPLE EYE  
Michael B. Rumelt MD, Pres.  
1094 Brooktrail Ct.  
Creve Coeur, MO 63141  
Tel: 314-569-2762

JOPLIN APPLE USERS GROUP  
Ross Lauck, Pres.  
1903 E. 36th  
Joplin, MO 64801  
Tel: 417-781-6433

PERSONAL COMP. CLUB OF ST. LOUIS  
Nicholas Naimo, Pres.  
274 Brightfield Dr.  
St. Louis, MO 63011  
Tel: 314-647-1465

APPLE JACKS  
Fred Bruner, Sec'y.  
11145 Suntree Rd. Apt.D  
St. Louis, MO 63138  
Tel: 314-869-9050

COMSTAT  
Kile Mullen, Pres.  
11610 Page Service Road  
St. Louis, MO 63141  
Tel: 314-432-7019

APPLE ACQUIRES OF THE OZARKS  
Milton Rhoads, Pres.  
1904 E. Meadowmere  
Springfield, MO 65804  
Tel: 417-862-6500

## Montana

APPLE ADDICTS  
att: Wiltse  
P.O. Box 489  
Broadus, MT 59317  
Tel: 406-784-2280

## Nebraska

### COMPUSERS

Dorothy G. Friend, Sec'y.  
P.O. Box 2064  
Hastings, NE 68901  
Tel: 402-463-6661

### OMAHA APPLE SAUCE

John Anderson, Libr.  
1915 S. 44 St. 112  
Omaha, NE 68105  
Tel: 402-558-8943

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Amherst, NH 03031  
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Chuck Segrest, Coord.  
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Tel: 505-821-7418

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1694 Central Ave.  
Albany, NY 12205  
Tel: 716-832-6002

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21 Ridgedale Ave.  
Farmingville, NY 11738  
Tel: 516-248-8080

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629 French Rd.  
New Hartford, NY 13413  
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07 Smith Bldg 128A  
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Tel: 701-746-0491

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82 New York Ave.  
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Greensboro, NC 27401  
Tel: 919-275-2983

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Gene Jackson, VP  
P.O. Box 31424  
Raleigh, NC 27622  
Tel: 919-781-3755

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7511 Twin Fir Ln. S.  
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Mechanicsburg, PA 17055

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Phillip Frafey, Treas.  
1753 York Rd.  
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Tel: 215-678-5661

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Mt. Pleasant, SC 29464

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3016 Glenwood  
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765 McMurray Dr. Apt. 04  
Nashville, TN 37211  
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Scott Boyd, Pres.  
925 N. Judge Ely Blvd.  
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John Cupak  
240 Calder Way  
State College, PA 16801  
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Pete Schmidt, VP  
P.O. Box 405  
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Tel: 803-359-7054

A.I.D.E.  
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1216 N. BLACK WELDOR AVE.  
OKLAHOMA CITY, OK 73106  
405-524-7403

BEACHWOOD SOFTWARE DIVISION  
900 CULVER ROAD  
ROCHESTER, NY 14069  
PHONE NUMBER N/A

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PHONE NUMBER N/A

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612-881-6955

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MADISON, WI 53703  
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PHONE NUMBER N/A

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TALLAHASSEE, FL 32304  
PHONE NUMBER N/A

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1615 5TH ST. SUI. B  
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SEATTLE, WA 98133  
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714-755-8143

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LOGAN, UT 84321  
800-453-2708

CE SOFTWARE  
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CENTEC PROCESS SYSTEMS  
CENTEC BLDG/11260 ROGER  
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CENTRAL POINT SOFTWARE, INC.  
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CHATSWORTH, CA 91311  
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LA MESA, CA 92041  
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PHONE NUMBER N/A

CHERRYGARTH FARMS SOFTWARE, INC.  
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AUBURN, IN 46706  
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150 ALLENDALE ROAD  
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GRAND FORKS, MN 55082  
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MORRIS PLAINS, NJ 07950  
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NILES, IL 60648  
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PHONE NUMBER N/A

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714-454-0121

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NORTHBRIDGE, CA 91324  
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SUNNYVALE, CA 94088  
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NORTHBROOK, IL 60062  
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SNOW HILL, NC 28580  
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SAN RAFAEL, CA 94912  
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BERKLEY, CA 94707  
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LAS CRUCES, NM 88004  
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INNOVATIVE SOFTWARE  
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PALO ALTO, CA 94306  
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PORTLAND, OR 97219  
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NORCROSS, GA 30092  
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STATE COLLEGE, PA 16801  
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INTERACTIVE SPORTS SYSTEMS  
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NEW ORLEANS, LA 70175  
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INTERACTIVE STRUCTURES, INC.  
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BALA CYNWYD, PA 19004  
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HOUSTON, TX 77042  
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SANTA CLARA, CA 95050  
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SYRACUSE, NY 13202  
PHONE NUMBER N/A

INTERPRETIVE EDUCATION  
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KALAMAZOO, MI 49002  
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PORT WASHINGTON, NY 11050  
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MORRO BAY, CA 93442  
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303-442-6363

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M & R ENGINEERING COMPANY  
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TULOCK, CA 95380  
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ROLLING HILLS ESTATES, CA 90274  
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BIG RAPIDS, MI 49307  
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ATLANTA, GA 30328  
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GAITHERSBURG, MD 20760  
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HARTFORD, CT 06103  
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LAFAYETTE, IN 47902  
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214-239-6620

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MCLEAN, VA 22102  
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STANFORD, CA 94305  
415-326-1927

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LA CANADA, CA 91011  
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NORWOOD, MA 02062  
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SANTA ANA, CA 92701  
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VERNON, CT 06066  
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GROSSE POINTE FARMS, MI 48236  
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MICROMATICS, INC.  
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801-292-2458

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LUMMI ISLAND, WA 98262  
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24627 WATT ROAD  
RAMONA, CA 92065  
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MICROSOFT CONSUMER PRODUCTS  
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BELLEVUE, WA 98004  
206-454-1315

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TEMPE, AZ 85281  
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P.O. BOX 96  
TCLOVANA PARK, OR 97145  
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DECATUR, GA 30033  
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TUCSON, AZ 85733  
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LIBERTYVILLE, IL 60048  
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PHONE NUMBER N/A

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SUNNYVALE, CA 94086  
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ATLANTA, GA 30341  
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COARSEGOLD, CA 93614  
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ASHLAND, OR 97520  
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PERIPHERALS UNLIMITED, INC.  
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913-381-1155 EXT.30

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LAKE ZURICH, IL 60047  
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FRAMINGHAM, MA 01701  
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OLD TAPPAN, NJ 07675  
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RENTON, WA 98055  
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PHONE NUMBER N/A

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PORTLAND, OR 97212  
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QUALITY SOFTWARE  
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REDESA, CA 91335  
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DENVER, CO 80218  
303-399-1096

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BOX 1754  
STILLWATER, OK 74074  
PHONE NUMBER N/A

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GOLDEN PLAZA 1-A  
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RE/INTERNATIONAL SYSTEMS CORPORATION  
6404 WILSHIRE BLVD.  
LOS ANGELES, CA 90048  
213-852-1054

REACTIVE SYSTEMS, INC.  
40 NORTH VAN BRUNT ST.  
ENGLEWOOD, NJ 07631  
201-568-0481

REAL ESTATE MICROCOMPUTER SYSTEMS, I  
2811 N.W. GRANT ST. SUITE C  
CORVALLIS, OR 97330  
503-757-8887

REAL ESTATE SOFTWARE  
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VANCOUVER, B.C., CANADA V6G 2T8  
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REALTY SOFTWARE  
1116 8TH ST. SUITE F  
MANHATTEN BEACH, CA 90266  
213-372-9419

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BOSTON, MA 02116  
PHONE NUMBER N/A

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PHOENIX, AZ 85018  
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RITAM CORPORATION  
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FAIRFIELD, IA 52556  
515-472-8262

RIVERBANK SOFTWARE  
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DENTON, MD 21629  
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ROUTE 309  
MONTGOMERYVILLE, PA 18936  
215-628-4960

ROCKY MOUNTAIN SOFTWARE  
1038 HAMILTON STREET  
VANCOUVER, B.C., CANADA V6B 2R9  
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ROSEN GRANDON ASSOCIATES  
7807 WHITTIER ST.  
TAMPA, FL 33167  
813-985-4911

RTR SOFTWARE, INC.  
P.O. BOX 12351  
EL PASO, TX 79912  
915-544-4397

NC S & H SOFTWARE  
BOX 5  
MANVEL, NV 58256  
201-768-9274

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4825 GEER ROAD  
HUGHSON, CA 95326  
209-883-0665

SAT. TRAC INTERNATIONAL  
4543 TEMPLETON GAP RD.  
COLORADO SPRINGS, CO 80909  
303-574-4150

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P.O. BOX 8050  
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 3G COMPANY, INC., G-41  
 A B BUSCAGLIA, PA-50, PA-70, PA-99  
 A2 DEVICES, G-42, M-16  
 AARDVARK SOFTWARE, BUS-126, BUS-127, BUS-128, BUS-129, BUS-133  
 ABT MICROCOMPUTER SOFTWARE, BUS-27, BUS-28, ED-122, PH-27, CM-8,  
 CP/M-26  
 ABW CORP., GR-33, G-56  
 ACCENT SOFTWARE, PA-13, GR-1  
 ACTION-RESEARCH NORTHWEST, M-2  
 ADDISON WESLEY PUBLISHING CO., ED-2, ED-7, ED-12, BUS-18, ED-94,  
 ED-95, ED-96, MD-15  
 ADS, PA-10, PA-39, ML-6  
 ADVANCED BUSINESS TECHNOLOGY, INC., BUS-86, PA-84, PA-94, TS-1  
 ADVANCED OPERATING SYSTEMS, G-12, PA-4, ED-134, EN-7, EN-8,  
 BUS-34, M-7, ED-171, ED-118, PH-18  
 ADVANCED SOFTWARE TECHNOLOGY, INC., DB-17, ED-132, BUS-130,  
 APIII-24  
 ADVENTURE INTERNATIONAL, G-1, G-2, G-6, G-7, G-8, G-9, G-10,  
 G-11, PA-4, SI-6, G-47, G-66, G-23, G-25, G-27, G-29,  
 G-30, G-35, G-37  
 AG\*PAC, APIII-30  
 AG-COM, AG-1, AG-4, AG-6, AG-7, AG-8, AG-9, AG-11, AG-13, AG-14,  
 AG-15, AG-16, AG-17, AG-18, AG-19  
 AGRICULTURAL MANAGEMENT AND ECONCMIC CONSULTING, AG-4, AG-13  
 AGS SOFTWARE, PH-24  
 ALAN G. HILL SOFTWARE, PA-37, PA-53, PA-96  
 ALEX MASSIMO, SI-1  
 ALF PRODUCTS, ED-137, ED-143, MU-3, MU-5, MU-10  
 ALLENBACH INDUSTRIES, SI-3  
 ALPHA-OMEGA SYSTEMS, INC., BUS-11  
 ALTERNATIVE SOFTWARE, INC., BUS-100  
 AMERICAN AVICULTURAL ART & SCIENCE, INC., ED-2, EN-15, ED-145,  
 ED-173, ED-185  
 AMERICAN SOFTWARE & SYSTEMS, ED-134  
 ANALYTIC SOLUTIONS, INC., PA-95  
 ANDENT, BUS-6, BUS-67, DB-16, SI-2, SI-6, SI-9, MD-5, MD-15,  
 MD-16, MD-17, MD-18  
 APPARAT, INC., PA-19, ED-139  
 APPLE COMPUTER, INC., BUS-108, ED-19, ED-20, ED-33, ED-42, DB-13,  
 PA-46, PA-47, ED-131, ED-132, ED-135, EN-2, EN-4, EN-25,  
 ED-61, ED-68, BUS-9, BUS-20, BUS-21, G-39, G-42, BUS-43,  
 BUS-62, PA-62, PA-65, ML-1, M-18, MU-3, MU-9, PA-85,  
 PA-94, PA-76, SI-2, BUS-114, BUS-118, BUS-132, TS-1,  
 WP-2, WP-9, ED-109, PH-22, GR-5, GR-22, GR-23, GR-25,  
 G-47, G-16, G-17, CM-24, APIII-1, APIII-2, APIII-4,  
 APIII-5, APIII-6, APIII-7, APIII-8, APIII-17, APIII-22,  
 APIII-25, APIII-26, APIII-33, APIII-35, APIII-42,  
 APIII-46  
 APPLE VALLEY SOFTWARE, INC., PA-26, PA-91  
 APPLIED ANALYTICS, INC., PA-80  
 APPLIED EDUCATIONAL PACKAGES, ED-13  
 APPLIED EDUCATIONAL SYSTEMS, ED-7  
 APPLIED MICROSYSTEMS, PA-70, PA-71, MD-7  
 APPLIED SOFTWARE TECHNOLOGY, DB-21, APIII-40  
 ARCHIVES, GR-35, G-14  
 ARIZONA COMPUTER SYSTEMS, DB-16  
 ARKEN & ASSOCIATES, BUS-101  
 ARTIFICIAL INTELLIGENCE RESEARCH GROUP, SI-4  
 ARTSCI, ML-2, WP-11, WP-12, WP-13  
 ASHTON-TATE, CP/M-21

ATSUOKO COMPUTING INTERNATIONAL, PH-25  
 AURORA SYSTEMS, INC., ED-14, AG-11, PA-12, BUS-111, ED-35,  
 BUS-28, ED-82, BUS-39, ED-146, ED-153, ED-155, ED-167,  
 ED-168  
 AUTOMATED SIMULATIONS, G-6, G-8, G-9, G-10, G-12, G-55, G-59,  
 G-62, G-65, G-26  
 AVALON HILL GAME COMPANY, G-3, G-5, G-6, G-48, G-54, G-57, G-59,  
 G-62, G-63, G-17, G-20  
 AVANT-GARDE CREATIONS, ED-1, G-1, G-7, BUS-91, ED-26, ED-51,  
 ED-135, ED-62, ED-67, ED-70, ML-8, ML-9, PA-68, ED-155,  
 ED-160, ED-183, ED-184, ED-125, PH-28, MD-16, GR-6,  
 GR-16, GR-31, GR-35, G-45, G-54, G-14, G-31, G-32, G-38  
 BARCLAY BRIDGE SUPPLIES, INC., G-40  
 BARRINGTON EDUCATIONAL COMPUTER COOPERATIVE, PA-79  
 BASIC BUSINESS SOFTWARE, INC., M-15, PH-24  
 BCD ASSOCIATION, ED-16  
 BEACHWOOD SOFTWARE DIVISION, CP/M-10  
 BEAGLE BROS MICRO SOFTWARE, PA-15, PA-48, PA-69, PA-70, PA-81,  
 GR-2, G-52, G-53, G-24  
 BERLINERSOFT, PA-81, GR-6  
 BERTAMAX, INC., ED-101, ED-109  
 BEZ, G-18  
 BIBLE RESEARCH SYSTEMS, SI-11  
 BIT 3 COMPUTER CORP., CM-12  
 BLUE LAKES COMPUTING, BUS-110, DB-19, M-17  
 BOARDROOM EXECUTIVE SOFTWARE, MD-1  
 BOB SEVEDGE, BUS-101  
 BORG-WARNER EDUCATIONAL SYSTEMS, ED-57, ED-78  
 BOURNE & CO., BUS-78  
 BPI SOLUTIONS, INC., BUS-38  
 BRODERBUND SOFTWARE, BUS-92, BUS-52, BUS-99, PA-69, GR-38, G-52,  
 G-55, G-63, G-15, G-16, G-21, G-24, G-25, G-31, G-33,  
 G-34, G-36  
 BRODERICK & ASSOCIATES, PA-27, BUS-47  
 BRODERUND SOFTWARE, G-26, G-30  
 BRUCE H. BARBER, PA-7  
 BUDGECO, G-36  
 BUSINESS & PROFESSIONAL SOFTWARE, INC., GR-28  
 BUSINESS COMPUTER SERVICES CO., DB-2  
 BUSINESS MASTER, DB-12, BUS-33, BUS-49  
 C & H VIDEO, PH-27, GR-38  
 C.F. CICCARELLA, ED-50  
 CALIFORNIA PACIFIC COMPUTER CO., G-1, GR-41, G-49, G-18, G-25  
 CALIFORNIA SCHOOL FOR THE DEAF, ED-2, PA-59, GR-15, GR-38  
 CAMP INTERNATIONAL, INC., MD-2  
 CAPTAIN SOFTWARE, PA-61  
 CARDIO-RESPIRATORY MANAGEMENT SYSTEMS, MD-3, MD-9, MD-17, MD-18,  
 MD-19  
 CAVALIER COMPUTER CORPORATION, G-19, G-27, G-34  
 CAVRI SYSTEMS, ED-47, ED-49, DB-20, WP-3, WP-4  
 CDS CORPORATION, PH-3  
 CENTEC PROCESS SYSTEMS, BUS-80  
 CENTRAL POINT SOFTWARE, INC., PA-40, PA-52  
 CHARLES O'NEILL, EN-27  
 CHEMRON SYSTEMS, INC., BUS-125  
 CHERRYGARTH FARMS SOFTWARE, INC., AG-3, AG-8, AG-10, AG-16  
 CHESTECH CORPORATION, MD-20  
 CLIMATE ASSESSMENT TECHNOLOGY, INC., EN-4, EN-10, APIII-11,  
 APIII-15  
 CLONE SOFTWARE, PA-24, G-51  
 COLUMBIA SOFTWARE, BUS-86, SI-5

COM PRESS, ED-15, ED-22, ED-128, EN-8, ED-58, ED-80, M-3, M-12,  
 ED-146, ED-147, ED-148, ED-149, ED-153, ED-157, ED-160,  
 ED-163, ED-167, ED-173, ED-185, ED-90, ED-101  
 COMMUNITREE GROUP, CM-10  
 COMP-U-CARD OF AMERICA, INC., TS-1  
 COMPAK, INC., ED-112  
 COMPU-TATIONS, ED-25, ED-40, ED-42, ED-51, ED-132, ED-81, ED-120  
 COMPU-TRON SOFTWARE SERVICE, PA-74  
 COMPUMAX, BUS-1, BUS-2, BUS-5, BUS-6, BUS-81, BUS-40, BUS-49,  
 BUS-54, BUS-56, BUS-58, BUS-59, BUS-97, BUS-101  
 COMPUSERVE, TS-4  
 COMPUTEK, G-40  
 COMPUTER ADVANCED IDEAS, PA-23, ED-46  
 COMPUTER CASE COMPANY, APIII-9  
 COMPUTER COMPONENTS, INC., PA-6, PA-24, PA-74  
 COMPUTER CONSULTING SERVICES, BUS-83  
 COMPUTER DESIGN LABS, CP/M-30, CP/M-31, CP/M-32, CP/M-35, CP/M-36  
 COMPUTER DISTRIBUTOR, BUS-75  
 COMPUTER FORUM, BUS-66  
 COMPUTER GAMES, G-53  
 COMPUTER HOUSE DIV/FLC, INC., EN-1, EN-20, BUS-15, M-19  
 COMPUTER PATHWAYS UNLIMITED, INC., CP/M-22  
 COMPUTER PRODUCTS INTERNATIONAL, INC., BUS-99  
 COMPUTER SCIENCE PRESS, INC., ED-19  
 COMPUTER SHACK, CP/M-17  
 COMPUTER SOLUTIONS, WP-30  
 COMPUTER SOLUTIONS OF AUSTRALIA, WP-31  
 COMPUTER STATIONS, INC., PA-11, PA-58, ED-58, PA-65, PA-94, GR-1,  
 GR-3, GR-4, GR-6, GR-7, GR-8, GR-11, GR-14, GR-16,  
 GR-19, GR-21, GR-23, GR-26, GR-30, GR-33, GR-40, GR-42,  
 CM-4, CM-11, CM-15  
 COMPUTER SYSTEMS DESIGN, PA-11, BUS-24  
 COMPUTER TRANSLATION, INC., ED-81  
 COMPUTER WORKS, INC., PA-23, ED-19  
 COMPUTERIZED CONSTRUCTION MANAGEMENT SYSTEMS, BUS-73, BUS-36,  
 BUS-65, APIII-8, APIII-9, APIII-10, APIII-16  
 COMPUTERIZED FARM INFORMATION SYSTEMS, INC., AG-4, AG-9, AG-10,  
 AG-14, AG-15, AG-18, AG-19, AG-20  
 COMPUTERIZED MANAGEMENT SYSTEMS, BUS-71, BUS-16, PH-14  
 COMPUTERLAND, AG-2  
 COMPUTERMART, PA-4, BUS-66, ML-1, MU-4, PH-3  
 COMPUTERS FOR TODAY, INC., MD-3  
 COMPUTING CONCEPTS, DB-18, ED-82, M-6, ED-144, SI-6, WP-14  
 CONDUIT, ED-39, ED-43, EN-10, M-4, M-9, ED-156, ED-158, ED-161,  
 ED-168, ED-175, ED-176, ED-178, ED-90, ED-102, ED-123  
 CONNECTICUT INFORMATION SYSTEMS, BUS-66, BUS-80, DB-2, ML-2,  
 SI-3, WP-13, WP-18, WP-29, WP-31, GR-4, GR-20  
 CONTEXT, INC., WP-26  
 CONTEXT MANAGEMENT SYSTEMS, INC., CM-22  
 CONTINENTAL SOFTWARE, BUS-3, BUS-7, BUS-49, BUS-57, ML-9,  
 BUS-103, PH-14, PH-15  
 CONVERGENT SYSTEMS, INC., ED-53, ED-56, ED-61, ED-62, ED-73  
 COOK COMPUTER COMPANY, PA-63  
 CORVUS SYSTEMS, TS-5, CM-6, CM-15  
 CPAIDS, CP/M-8, CP/M-13, CP/M-17, CP/M-22, CP/M-23, CP/M-32  
 CPU SOFTWARE, ED-128  
 CRANE SOFTWARE, INC., PA-55  
 CREATIVE COMPUTING, PH-16, G-33, G-34  
 CREATIVE COMPUTING SOFTWARE, ED-182, PH-2, PH-23, GR-21, G-46,  
 G-53, G-54, G-57, G-60, G-65, G-18  
 CREATIVE DISCOUNT SOFTWARE, ED-4, ED-7, ED-8, BUS-84, ED-22,  
 G-42, ML-7, M-16, BUS-100, WP-14, PH-6  
 CREATIVE SOFTWARE, PA-78, PH-21, G-58, G-36, APIII-11

CRITERION SYSTEMS GAMES, ML-2  
 CROW RIDGE ASSOCIATES, INC., GR-4, GR-37  
 CYBER-TECH, BUS-114  
 CYBERIA, INC., AG-9, AG-13  
 CYBERTRONICS INTERNATIONAL, INC., PA-89  
 DAKIN 5 CORPORATION, G-2, PA-8, BUS-41, BUS-42  
 DANN MCCREARY, PA-20, PA-24, PA-46  
 DATA SECURITY CONCEPTS, BUS-94, PA-71, PA-73, PA-75, PA-83  
 DATA STRIKE, BUS-68  
 DATA SYSTEMS, INC., APIII-8, APIII-9, APIII-21, APIII-27  
 DATA TRANSFORMS, WP-7, GR-11, GR-15, GR-41  
 DATACOPE, PA-41, PA-96, PA-98, WP-22  
 DATAMOST, BUS-131, G-32, G-35  
 DATASOFT, INC., PA-25, GR-20  
 DECISION DATA, INC., AG-4, AG-12, AG-16  
 DECISION RESOURCES, GR-7  
 DECISION SUPPORT SOFTWARE, BUS-27  
 DECISION SYSTEMS, PA-9, PA-11, PA-14, PA-15, PA-26, PA-35, DB-15,  
 PA-67  
 DECISIONMAKERS, INC., BUS-72  
 DEVELOPMENTAL LEARNING MATERIALS, ED-91, ED-92, ED-98, ED-99,  
 ED-113, ED-114  
 DICKENS DATA SYSTEM, GR-40  
 DIGI-SCAN, INC., DB-5  
 DIGITAL MARKETING, PH-14  
 DIGITAL RESEARCH, CP/M-29, CP/M-30, CP/M-32, CP/M-34, CP/M-35,  
 CP/M-36  
 DISCO TECH., EN-3, EN-9, EN-10, EN-11, EN-16, EN-17, EN-20  
 DISK DEPOT, ED-2, ED-5, ED-8, ED-9, ED-13, ED-14, ED-116  
 DOUBLE-GOLD SOFTWARE, PA-53  
 DOW JONES, TS-2  
 DUOSOFT CORPORATION, BUS-10  
 DYNACOMP, INC., EN-9, EN-25, G-39, G-41, M-6, M-14, M-15, WP-21  
 DYNACOMP INC., SI-4  
 EASTERN HOUSE SOFTWARE, PA-28, ML-4, WP-15  
 ECOSOFT, CP/M-10  
 EDUCATIONAL COMPUTING, ED-162, PH-5  
 EDUCATIONAL COURSEWARE, ED-26, ED-38, ED-44, ED-70, PA-70,  
 ED-144, ED-145, ED-160, ED-164, ED-182  
 EDUCATIONAL SERVICES MANAGEMENT CORPORATION, ED-2  
 EDUCATIONAL SERVICES OF ALASKA, ED-70  
 EDUCATIONAL SOFTWARE PROFESSIONALS, LTD., ED-45  
 EDUCATIONAL TEACHING AIDS DIV., ED-98, ED-105, ED-126  
 EDUCATIONAL TIMESHARING SYSTEMS, INC., ED-6, ED-9  
 EDUTECH, ED-144, ED-153, ED-155, ED-156, ED-160, ED-162, ED-164,  
 ED-165, ED-167, ED-170, ED-172, ED-173, SI-1  
 EDUTEK CORP., ED-28, ED-37, ED-138, ED-139, ED-140, ED-142,  
 ED-54, ED-58, ED-70, ED-72, ED-74, ED-77, ED-152, ED-174  
 EDUWARE SERVICES, G-9, EN-27, ED-68, M-16, ED-161, WP-21, ED-94,  
 ED-97, G-51, G-55, G-58, G-61, G-64  
 EICONICS, INC., ED-27  
 EIDOS SYSTEMS, CP/M-29, CP/M-31, CP/M-34, CP/M-35  
 ENERGY GAMES, GR-26, G-47, G-31  
 ENTERPRISE SYSTEMS, INC., MD-1  
 ESP COMPUTER RESOURCES, INC., DB-6  
 EVANS NEWTON, INC., ED-3, ED-10, ED-11, ED-12  
 EVENTIDE CLOCKWORKS, INC., EN-18  
 EXECUTIVE DATA SYSTEMS, INC., BUS-74, ML-6  
 EXPRESS MARKETING, BUS-84  
 FARMPLAN COMPUTER SYSTEMS, INC., AG-8, AG-10, AG-13, AG-15,  
 AG-16, AG-18  
 FINANCIAL SYSTEMS, INC., AG-14  
 FIREFLY COMPUTING, GR-20



FIRST SOFTWARE, INC., CM-14  
 FLIGHT OPPTS, SI-7, SI-10, PH-26  
 FLIPTRACK TRAINING TAPES, ED-29, ED-127  
 FRANKLIN SOFTWARE, ED-5  
 FULLMER ASSOCIATES, ED-47, ED-53, M-10  
 FUTURE TECH DISTRIBUTORS, BUS-117  
 GAF SOFTWARE, PA-49, PA-51, PA-52  
 GALAXY, BUS-112  
 GARBO SOFTWARE, BUS-75  
 GENERAL VIDEOTEX CORP., TS-5, TS-6  
 GEORGE EARL, ED-66, ED-81, M-1  
 GEORGE OTIS COMPANIES, BUS-35  
 GEOTEC, PA-64  
 GOLWAY COMPUTER ENTERPRISES, BUS-1, BUS-4, ML-4  
 GREAT DIVIDE SOFTWARE, INC., APIII-13  
 GREAT LAKES DIGITAL RESOURCES, PA-93  
 GREAT PLAINS SOFTWARE, APIII-37  
 GROVER & ASSOCIATES, CM-12  
 GUARDIAN SOFTWARE, BUS-123  
 H & H TRADING, BUS-117, BUS-120  
 H.C.I., AG-3, AG-4, AG-5, AG-8, AG-11, AG-15, AG-18  
 HARRIS LABORATORIES, INC., AG-7, AG-17  
 HARRISONBURG COMPUTER SERVICES, EN-23, G-27, APIII-29  
 HARTLEY COURSEWARE, INC., ED-9, ED-25, ED-60, ED-62, ED-67,  
 ED-69, ED-72, ED-79, ED-181, ED-102, ED-103, ED-115,  
 ED-126  
 HARVEST COMPUTER SYSTEMS, AG-11, AG-12, AG-15, AG-19, AG-20  
 HAYDEN BOOK COMPANY, PA-6, PA-12, PA-13, PA-14, PA-18, PA-23,  
 ED-29, PA-33, PA-34, PA-43, PA-58, EN-8, EN-11, EN-13,  
 EN-14, EN-15, BUS-58, PA-67, M-4, M-7, M-11, MU-10,  
 WP-14, PH-12, MD-6, GR-10, GR-18, G-59, G-60, G-18, G-24  
 HAYES COMPUTER SYSTEMS, BUS-53, BUS-127  
 HAYES MICROCOMPUTER PRODUCTS, INC., CM-13, CM-20  
 HI-PLAINS SYSTEMS, INC., AG-4  
 HIGH TECHNOLOGY, INC., BUS-71, BUS-81, BUS-82, BUS-87, BUS-88,  
 BUS-90, DB-3, DB-14, BUS-63, BUS-64, ML-3, M-13, PA-80,  
 ED-150, ED-151, ED-156, WP-7, PH-12, MD-6, APIII-16  
 HIGHLANDS COMPUTER SERVICES, G-4, G-6, G-9, G-11, PA-25, PA-54,  
 BUS-47  
 HOMEWARE, G-10, ED-124, PH-1, PH-6, PH-18, PH-20, PH-24  
 HORIZON SIMULATIONS, G-2, G-61  
 HOWARD SOFTWARE SERVICES, PA-11, BUS-108, PA-39, BUS-12, BUS-120,  
 BUS-134, WP-30  
 HUMAN SYSTEMS DYNAMICS, M-3, M-11, M-12, M-14, M-18  
 IDEATECH CO., ED-55, ED-65, ED-113, ED-115  
 IMAGE PRODUCTS, INC., PA-30, PA-37, PA-44  
 INDIAN HEAD SOFTWARE, ED-1, ED-7, ED-38, PA-39, PA-52, ED-130,  
 ED-66, PA-75, PA-77, ED-151, WP-15, ED-99, ED-104,  
 ED-107, ED-113, ED-115, ED-116, ED-117, ED-126  
 INDIVIDUALIZED OPERAND (IO), BUS-96  
 INFORMATION UNLIMITED SOFTWARE, DB-5, ML-2, ED-170, WP-5, WP-6, CM-10  
 INNOVATIVE DESIGN, G-29  
 INNOVATIVE SOFTWARE, CP/M-22, CP/M-40  
 INSOF CORP., PA-19, BUS-33, PA-67, MU-12, CP/M-8  
 INST SYS/SCHOOL DIST OF PHILADELPHIA, ED-150  
 INSTANT SOFTWARE, EN-18, BUS-36, SI-1, PH-4, G-46, G-47, G-50,  
 G-53, G-56, G-57, G-58, G-60, G-61, G-16, G-25, G-26  
 INSTITUTE OF INDUSTRIAL ENGINEERS, BUS-84, EN-9, EN-14, EN-15,  
 EN-16, EN-17, EN-27, BUS-14, M-15  
 INSTRUCTIONAL/COMM TECH, INC., ED-56  
 INTERACTIVE MICROWARE, INC., EN-23, M-5, GR-27, GR-41  
 INTERACTIVE SPORTS SYSTEMS, SI-8  
 INTERACTIVE STRUCTURES, INC., PA-72, PA-73, PA-75

INTERLUDE, PH-16  
 INTERPRETIVE EDUCATION, BUS-80, ED-118, PH-9, PH-15, PH-16, PH-23  
 INVESTORS SOFTWARE, BUS-118  
 ISLAND GRAPHICS, GR-37  
 J & S SOFTWARE, ED-15, ED-71, ED-150, ED-151, ED-164  
 JAGDSTAFFEL SOFTWARE, ED-83  
 JAMESTOWN PUBLISHERS, ED-58  
 JOHNNY APPLESEED SOFTWARE AND COMPANY, PA-5, PH-5  
 KEITH HARREL, PA-92  
 KENSINGTON MICROWARE, LTD., WP-7  
 KERN PUBLICATIONS, EN-8, EN-10, EN-20, GR-14  
 KEY SYSTEMS, INC., CP/M-12  
 KILOWARE, PA-50  
 KLEINHAMMER BUSINESS SOFTWARE, ED-106, ED-118  
 KORSMEYER ELECTRONIC DESIGN, EN-6, EN-11  
 KRELL SOFTWARE, ED-4, ED-9, G-6, G-9, G-11, ED-31, ED-53, ED-82,  
 ED-180, ED-119, G-66  
 L & S COMPUTERWARE, ED-129  
 LAMAR INSTRUMENTS, EN-1  
 LAST, BUS-66, WP-15, PH-23  
 LAUMER RESEARCH, PA-34  
 LAUREL SOFTWARE, ED-85  
 LAZER SYSTEMS, PA-25, PA-26, PA-32, PA-37, ED-133  
 LEADING EDGE PRODUCTS, INC., CM-20  
 LEARNING TOOLS, INC., ED-1, ED-3  
 LEGEND INDUSTRIES, LTD., PA-44, PA-54, PA-76  
 LIFE PLAN ANALYSTS, BUS-88  
 LIFEBOAT ASSOCIATES, CP/M-7, CP/M-10, CP/M-13, CP/M-25, CP/M-29,  
 CP/M-34, CP/M-40, CP/M-41, CP/M-42  
 LINK SYSTEMS, DB-6, PA-89, PA-90, CM-9  
 LITTLE GENIUS, LTD., PA-61  
 LJK, PA-26, DB-5, WP-10  
 LOADSTAR TECHNOLOGY CORPORATION, CP/M-28  
 LOGICAL SOFTWARE, ML-3  
 LOTUS, GR-3, GR-11  
 M & M SOFTWARE, INC., PA-88  
 M.D. SOFTWARE, PA-43  
 MACROTRONICS, INC., CM-2  
 MALIBU MICROCOMPUTING, PA-1, G-14  
 MANNEE MEDICAL, INC., MD-18  
 MASTERWORKS SOFTWARE, INC., PA-53, PA-54, BUS-98, PH-8  
 MATH SOFTWARE, ED-162, ED-92, ED-93, ED-94, ED-100, ED-107,  
 ED-109, ED-113, ED-120, ED-121, ED-124  
 MATHWARE/MATH CITY, ED-129, ED-93  
 MATRIX SOFTWARE, PA-98, PH-1, PH-2, PH-4, PH-5, PH-6, PH-7, PH-8,  
 PH-9, PH-10, PH-11, PH-13, PH-16, PH-17, PH-20, PH-22,  
 PH-23, PH-24, PH-25, PH-28, PH-29  
 MD PROCESSOR II, WP-30  
 MED DATA, MD-9  
 MED SYSTEMS SOFTWARE, G-5, G-21  
 MEDI-SIM, INC., MD-13  
 MEDIA SERVICE CONCEPTS, BUS-66, BUS-76, BUS-82, BUS-85, EN-23,  
 MU-2, CM-21  
 MEDICAL OFFICE SYSTEMS, INC., MD-9  
 MENTOR SOFTWARE, INC., ED-30, ED-69, ED-72, ED-161, ED-172,  
 ED-93, ED-110  
 MERRIMACK SYSTEMS, CP/M-40  
 MERRY BEE COMMUNICATIONS, ED-142, ED-53, ED-54, ED-57, ED-74,  
 ED-77  
 METACOMET SOFTWARE, ED-125  
 MICRO AG, AG-1  
 MICRO ASSOCIATES, EN-4  
 MICRO DATA BASE SYSTEMS, INC., DB-25, CP/M-21

MICRO FOCUS, PA-64, CP/M-31, CP/M-33, CP/M-34  
 MICRO LAB, ED-17, PA-31, BUS-88, ED-48, DB-4, DB-21, ED-71,  
 PA-83, BUS-134, G-22  
 MICRO LEARNINGWARE, AG-6, BUS-69, ED-180, ED-100, ED-101  
 MICRO MUSIC, INC., ED-137, ED-138, ED-139, ED-140, ED-143, MU-4,  
 MU-5  
 MICRO PERIPHERALS, INC., GR-5, GR-13, GR-19, GR-42  
 MICRO POWER & LIGHT CO., ED-27, ED-45, ED-46, ED-127, ED-131,  
 ED-55, ED-77, ED-78, ED-88, ED-169, ED-98, ED-105,  
 ED-117, ED-119, ED-125, MD-13, MD-16  
 MICRO SOFTWARE SYSTEMS, PA-40, PA-91, WP-7, WP-20, CM-1, CM-5,  
 CM-19  
 MICRO TSP, M-13  
 MICRO WARE, PA-80, GR-14, GR-31  
 MICRO-SPARC, INC., PA-42, PA-68, PA-81, PA-82  
 MICROCOM, INC., CM-12, CM-13  
 MICROCOMPUTER TECHNOLOGY, INC., DB-20  
 MICROCOMPUTING RESEARCH, BUS-123  
 MICROCONTROL SYSTEMS, GR-39  
 MICROCRAFT SYSTEMS, INC., PA-14, PA-66  
 MICROMATICS, INC., ED-71, BUS-22, BUS-23  
 MICROMOTION, PA-65  
 MICROPHYS PROGRAMS, ED-54, ED-152, ED-165, ED-166, ED-106  
 MICROPI, ED-58, ED-167  
 MICROPRODUCTS, PA-18, PA-19, PA-21, PA-22, PA-29, PA-32, MU-8,  
 PA-70  
 MICROSOFT CONSUMER PRODUCTS, G-1, PA-19, CP/M-29, CP/M-30,  
 CP/M-31, CP/M-32, CP/M-33, CP/M-35  
 MICROSOURCE, BUS-53  
 MICROSTAT SOFTWARE, ED-159  
 MICROSTUF, INC., CP/M-18  
 MICROWARE ASSOCIATES, INC., APIII-29  
 MIKE ROWE PRODUCTIONS, PA-59, PH-6  
 MILLIKEN PUBLISHING, ED-59, ED-60, ED-111  
 MILTON BRADLEY EDUCATIONAL SOFTWARE, ED-27, ED-34, ED-63, ED-64,  
 ED-74, ED-76, ED-97, ED-99, ED-114  
 MIMIC, INC., MU-6  
 MIN MICROCOMPUTER SOFTWARE, BUS-110, CM-9  
 MIRCO-SPARC, INC., WP-10  
 MONEY DISK, BUS-6, BUS-12, BUS-56  
 MONEYBEE, BUS-117  
 MONUMENT COMPUTER SERVICE, ED-1, BUS-7, BUS-78, BUS-80, BUS-83,  
 ED-38, ED-40, ED-44, ED-49, DB-3, DB-19, EN-5, G-41,  
 BUS-33, BUS-34, BUS-37, BUS-61, ML-6, BUS-98, BUS-102,  
 PA-69, BUS-116, BUS-131, WP-10, WP-11, WP-15, PH-12,  
 PH-21, MD-5, MD-8, APIII-10, APIII-20, APIII-25  
 MORNINGSTAR, PA-97  
 MOUNTAIN HARDWARE, MU-5  
 MPA ENTERPRISES, PA-14, BUS-75, BUS-77, PA-39, EN-27, BUS-11,  
 M-13, WP-30, PH-15  
 MUSE SOFTWARE, G-3, ED-38, DB-16, ED-86, EN-25, ML-8, M-8, MU-7,  
 MU-12, WP-1, WP-4, WP-7, WP-18, WP-19, ED-100, GR-10,  
 GR-40, G-46, G-53, G-56, G-59, G-64, G-15, G-22, G-23,  
 G-35  
 NAROM INDUSTRIES, ED-78  
 NATURAL LANGUAGE SYSTEMS, BUS-93  
 NESTAR, TS-4  
 NIBBLE, PA-2, PA-3, PA-5, BUS-94, ED-19, ED-51, PA-37, BUS-14,  
 BUS-18, BUS-34, ML-1, PA-77, SI-6, WP-1, WP-11, PH-19,  
 PH-22, GR-4, GR-20, GR-32, G-51, G-52, G-56, G-64, G-15,  
 G-26, G-33  
 NIKROM TECHNICAL PRODUCTS, PA-78  
 NORELL DATA SYSTEMS, PA-51

NOVATION, INC., CM-1, CM-3, CM-7  
 NUMBER NINE, INC., PA-18  
 OASIS SYSTEMS, WP-29  
 OMNICO, ED-5, ED-13, ED-19, WP-9  
 ON-LINE SYSTEMS, G-4, G-6, G-12, PA-9, PA-28, PA-33, WP-16,  
 WP-20, WP-23, WP-26, GR-21, GR-32, GR-33, G-54, G-20,  
 G-21, G-27, G-29, G-31, G-35, G-36, G-38  
 ONGOING IDEAS, PA-46, PA-57, M-16, PA-92  
 OPTIMIZED SYSTEMS SOFTWARE, PA-7, PA-22, PA-39, PA-58  
 OPTIONS 80, BUS-20  
 ORGANIC SOFTWARE, CP/M-41  
 OSBORNE/MCGRAW HILL, EN-17  
 PACIFIC BANCORPORATION DATA SYSTEMS, INC., BUS-11, BUS-20,  
 BUS-25, BUS-100  
 PADMEDE COMPUTER SERVICES, BUS-77, BUS-39, BUS-40, BUS-64,  
 BUS-118  
 PANSOPHICS, LTD., APIII-15  
 PASSPORT DESIGNS, INC., ED-142, MU-10  
 PCD SYSTEMS, ML-4, PH-21  
 PEACHTREE SOFTWARE, CP/M-1, CP/M-2, CP/M-3, CP/M-5, CP/M-9,  
 CP/M-16, CP/M-24, CP/M-37, CP/M-39  
 PEAR SOFTWARE, PA-59, PH-26  
 PENGUIN SOFTWARE, GR-2, GR-29, GR-34, GR-36  
 PERSONAL COMPUTER CENTER, ED-36  
 PERSONAL COMPUTER SERVICE, WP-13  
 PHOENIX SOFTWARE, G-7, G-8, GR-42, CP/M-30, CP/M-31, CP/M-34  
 PLAIN AND SIMPLE SOFTWARE, APIII-26  
 POWERSOFT, INC., PA-4, EN-5, G-39, PA-76, GR-21  
 PRO BIKE, INC., ML-7  
 PROFESSIONAL BUSINESS SOFTWARE, MD-10  
 PROFESSIONAL COMPUTER SYSTEMS, ED-88, ED-144, BUS-112, PH-5, MD-19  
 PROFESSIONAL MEDICAL SOFTWARE, MD-4, MD-7, MD-19  
 PROGRAM DESIGN, INC., ED-16, ED-49, ED-127, ED-55, ED-78, ED-81, ED-92  
 PROGRAMS FOR LEARNING, ED-146, ED-155, ED-163, ED-164  
 PROGRESSIVE SOFTWARE, PA-100, PH-3, GR-15  
 PUGET SOUND PROGRAM LIBRARY EXCHANGE, PA-32  
 PYGMY PROGRAMMING, PA-15, PA-38, WP-3  
 QUALITY EDUCATION DESIGNS, ED-104  
 QUALITY SOFTWARE, G-51  
 QUARK ENGINEERING, APIII-17, APIII-19, APIII-38, APIII-39, APIII-45  
 QUINSEPT, INC., SI-5  
 R-ALPHA SOFTWARE, GR-39  
 RAFF CRAFT, G-40  
 RAINBOW COMPUTING, BUS-67, BUS-70, ED-137, ED-138, ED-139,  
 ED-140, ED-143, ED-61, G-40, G-41, M-17, MU-4, MU-9,  
 PA-77, SI-1, G-45, G-56  
 RE/INTERNATIONAL SYSTEMS CORPORATION, BUS-10, BUS-11, BUS-13,  
 BUS-14, BUS-15, BUS-17, BUS-18, BUS-19, BUS-25, BUS-26,  
 ML-1, WP-30, PH-12  
 REACTIVE SYSTEMS, INC., ED-51  
 REAL ESTATE MICROCOMPUTER SYSTEMS, INC., BUS-104, BUS-105,  
 BUS-106, BUS-109  
 REAL ESTATE SOFTWARE, BUS-109  
 REALTY SOFTWARE, BUS-104, BUS-105, BUS-106, BUS-107, BUS-108,  
 BUS-110, BUS-10, BUS-11, PH-15  
 RICHARD LORANCE & ASSOC., LTD., PH-13  
 RIGHT ON PROGRAMS, ED-87, ED-88, ED-152, ED-156, ED-160, ED-163,  
 ED-168, ED-169, ED-170, ED-171, ED-172, ED-174, ED-178,  
 ED-181, ED-183, ED-184, ED-185, ED-90, ED-108, ED-109,  
 ED-115, ED-116, ED-118, ED-120  
 RITAM CORPORATION, ED-61  
 ROCKY MOUNTAIN SOFTWARE, PA-47, GR-21, GR-32, CM-11, CM-14  
 ROSEN GRANDON ASSOCIATES, M-1



RTR SOFTWARE, INC., BUS-116  
 S & H SOFTWARE, PA-60, PA-96  
 SAT. TRAC INTERNATIONAL, ED-167  
 SATURN SYSTEMS, PA-37, PA-68, PA-82  
 SCHARF SOFTWARE, GR-7  
 SCIENCE RESEARCH ASSOCIATES, INC., ED-24, ED-79  
 SCIENTIFIC SOFTWARE, ED-14  
 SCOTT FORESMAN & CO. ELECTRONICS PUB., BUS-87  
 SCOTT INSTRUMENTS, ED-41  
 SCRIPPS DATA SYSTEMS, INC., BUS-64  
 SEI, ED-77, ED-81  
 SELECT INFORMATION SYSTEMS, WP-17  
 SENSATIONAL SOFTWARE, ED-8, G-1, G-12, PA-43, ED-69, ED-174,  
 ED-179, ED-180, ED-182, ED-184, G-28, G-33, G-36, G-37  
 SENSIBLE SOFTWARE, PA-3, PA-5, PA-6, PA-7, PA-32, PA-38, PA-39,  
 PA-44, PA-45, PA-49, PA-56, PA-57, PA-92, PA-72, WP-21,  
 WP-27  
 SENTIENT SOFTWARE, G-2, BUS-1, BUS-5, BUS-42, BUS-45, BUS-50, G-20  
 SERENDIPITY SYSTEMS, INC., BUS-55, BUS-59, M-2, CM-12, CP/M-12  
 SERRA SOFTWARE, G-15  
 SERUS SOFTWARE, GR-38  
 SERVICES UNIQUE, INC., PA-45, WP-1, WP-4  
 SHAKTI SYSTEMS, INC., DB-17  
 SHANALI, INC., BUS-88  
 SHERMAN ELECTRONICS, PA-56  
 SILICON VALLEY SOFTWARE, WP-28  
 SILWA ENTERPRISES, ED-82, ED-109  
 SIR-TECH SOFTWARE, INC., G-4, G-13, DB-15, ML-7, CM-23  
 SIRIUS SOFTWARE, G-29, INC., G-3, G-4, G-5, GR-10, G-50, G-17,  
 G-19, G-20, G-21, G-22, G-23, G-24, G-25, G-26, G-28,  
 G-30, G-32, G-37  
 SMALL BUSINESS COMPUTER SYSTEMS, BUS-4, BUS-51  
 SMALL SYSTEM GROUP, MD-8  
 SMART WARE, ED-96, ED-108, ED-118, GR-14, GR-42, CM-9  
 SMITH MICRO SOFTWARE, BUS-120  
 SOF/SYS, INC., WP-24, WP-25, WP-26  
 SOFT CONTROL SYSTEMS, WP-8  
 SOFT ONE, PH-12, MD-13  
 SOFTAGON, INC., DB-21, PA-59, PA-71, PA-74, PA-76  
 SOFTART SOFTWARE, GR-19  
 SOFTECH, BUS-62  
 SOFTECH MICROSYSTEMS, PA-95  
 SOFTHOUSE, DB-12  
 SOFTPAK ASSOC., PA-93  
 SOFTSMITH, PA-76  
 SOFTWAND SOFTWARE, BUS-57  
 SOFTWARE CONNECTIONS, ED-45  
 SOFTWARE HOUSE INC., PH-2  
 SOFTWARE PUBLISHING CORPORATION, DB-17, GR-24  
 SOFTWARE RESOURCES, INC., BUS-124, GR-28, APIII-27  
 SOFTWARE RESOURCES COMPUTER WORKS, INC., APIII-20  
 SOFTWARE SORCERY, INC., CM-5, CM-19  
 SOFTWARE TECHNOLOGY FOR COMPUTERS, BUS-1, BUS-4, BUS-82, BUS-104,  
 DB-14, ED-60, ED-65, BUS-50, BUS-58, ML-6, BUS-96,  
 BUS-101, GR-34  
 SOLARSOFT, INC., EN-18, EN-21, EN-26  
 SOLARTEK, EN-20, EN-22  
 SOLIDUS INTERNATIONAL CORP., BUS-48, PA-73, BUS-121, BUS-122  
 SONORA COMPUTING, MU-7  
 SOUND SOFTWARE SYSTEMS, BUS-70, DB-11, BUS-99, SI-1, WP-11, MD-1,  
 MD-7, MD-10, MD-17, MD-19

SOUTHWESTERN DATA SYSTEMS, PA-1, PA-2, PA-3, PA-10, PA-11, PA-14,  
 PA-30, BUS-77, PA-35, DB-11, WP-22, GR-26, GR-27, CM-3,  
 CM-8, CM-17, CP/M-18, CP/M-20  
 SPECTRA/SOFT, INC., MD-4, MD-10  
 SPECTRUM SOFTWARE, BUS-4, BUS-72, BUS-93, EN-2, EN-5, EN-11,  
 BUS-21, BUS-35, BUS-44, BUS-48, BUS-55, M-1, M-14, M-15,  
 ED-112, PH-14, G-31  
 SPIDER SOFTWARE, DB-1  
 SPORT TECH, ED-131  
 SPORTSWARE, INC., G-39  
 SSM MICROCOMPUTER PRODUCTS, CM-23  
 STEKETEE EDUCATIONAL SOFTWARE, ED-42, PA-46, ED-86, ML-3, SI-4,  
 ED-97, ED-104, ED-105, ED-106, ED-114, ED-116, ED-117,  
 ED-120, ED-122, GR-6  
 STERLING SWIFT PUBLISHING CO., ED-34  
 STOCK MARKET SOFTWARE, INC., BUS-112  
 STONEHENGE COMPUTER COMPANY, ML-1  
 STONEWARE MICROCOMPUTER PRODUCTS, BUS-75, ED-22, DB-7, DB-8,  
 DB-10, M-6, GR-8, GR-13, G-56, G-19  
 STRATEGIC SIMULATIONS, ED-182, G-46, G-48, G-49, G-50, G-57,  
 G-58, G-59, G-61, G-63, G-64, G-65, APIII-11, APIII-13,  
 APIII-14, APIII-25, APIII-36  
 STRAWBERRY TREE COMPUTERS, EN-4, EN-11, EN-14, EN-23  
 STROBE, INC., GR-30  
 SUBLOGIC COMMUNICATIONS, INC., ED-53, GR-1, G-45, G-14, G-15  
 SVE - SOCIETY FOR VISUAL EDUCATION, INC., ED-24, ED-30, ED-34,  
 ED-48  
 SYBEX, INC., PA-19, PA-32  
 SYMPATHETIC SOFTWARE, PA-45, GR-41  
 SYNERGISTIC SOFTWARE, G-2, G-7, G-12, PA-10, PA-11, PA-35, DB-20,  
 PA-42, ED-82, BUS-63, ML-5, PA-77, ED-172, SI-10, PH-17,  
 GR-17, G-45, G-51, G-16, G-17, G-22, G-28, G-29, G-34,  
 APIII-48  
 SYNTAURI, ED-140, MU-1, MU-2  
 SYNTONIC SOFTWARE CORP., BUS-74  
 SYSTEM DECISIONS GROUP, APIII-44  
 SYSTEM FABRICATORS, APIII-29  
 SYSTEMS DESIGN LAB, G-42, G-43, ML-4, ML-5, M-14, WP-21, WP-29,  
 GR-16, GR-36, G-32  
 SYSTEMS PLUS, BUS-45  
 T & W SYSTEMS, INC., EN-1, EN-23  
 T.H.E.S.I.S., ED-125  
 TCS, CP/M-7, CP/M-11, CP/M-13, CP/M-14  
 TEACH YOURSELF BY COMPUTER (TYC) SOFTWARE, ED-31, ED-127, ED-128,  
 ED-132, ED-134, ED-154, ED-173, ED-182  
 TECHNICAL SOFTWARE, EN-3, PH-11  
 TECK ASSOCIATES, ED-25, ED-130, PH-13  
 TELEPHONE SOFTWARE CONNECTION, BUS-93, PA-49, M-7, PA-72, PA-76,  
 PH-11, GR-28, G-47, CM-1, CM-19, CM-20, CM-22, CM-25  
 TERRAPIN PRODUCTS, ED-49  
 THE BIG PIG SOFTWARE COMPANY, PA-58  
 THE COMPUTER CENTER, AG-20  
 THE COMPUTER CONNECTION, ED-94  
 THE COMPUTER EMPORIUM, G-11, PA-7  
 THE CORPORATION FOR PUBLIC INFORMATION, ED-15  
 THE DENVER SOFTWARE CO., BUS-37, PA-92, PA-94, APIII-12  
 THE GEEGERY SOFTWARE WORKS, PA-78  
 THE INSTITUTE FOR ECONOMETRIC RESEARCH, BUS-119  
 THE INTELLIGENT INVESTOR, BUS-115  
 THE LEARNING COMPANY, ED-22, ED-23, ED-28, ED-30, ED-39  
 THE SOFTWARE FACTORY, PA-63, PH-4  
 THE SOURCE TELECOMPUTING CORP., TS-6  
 THE TELESYS GROUP, INC., EN-1

THE WINCHENDON GROUP, M-7, M-8, M-19  
THUNDERWARE, INC., PA-48  
TNW, CM-17  
TPS (TIME PROVEN SYSTEMS, INC.), BUS-103  
TUCKER FARM CONSULTANTS, AG-3  
UNICOM DIVISION OF UNITED CAMERA, INC., ED-17  
UNIDATA, INC., ED-86  
UNIQUE INFORMATION SYSTEMS, INC., CP/M-8  
UNITED SOFTWARE OF AMERICA, PA-18, DB-18, BUS-44, BUS-47, MU-11,  
PA-98, PA-99, BUS-112, BUS-119, PH-8, PH-18, GR-4  
UNIVAIR, CP/M-6, CP/M-8, CP/M-9, CP/M-10, CP/M-26  
UNIVERSAL SYSTEMS FOR EDUCATION, INC., ED-10, ED-35  
URBAN AGGREGATES, INC., BUS-116, BUS-119  
VERNON TECH CORP., BUS-69, BUS-70, BUS-78, BUS-87, BUS-95  
VERSA COMPUTING, INC., PA-1, BUS-70, ED-181, GR-12, GR-13  
VIDEO WORLD, BUS-82, PH-6  
VIDEX, INC., PA-82  
VISICORP, BUS-94, DB-2, DB-23, DB-24, BUS-13, BUS-29, BUS-30,  
BUS-31, CM-24, APIII-12, APIII-44  
VITALOGRAPH MEDICAL INSTRUMENTATION, MD-19  
VYNET CORPORATION, MU-12  
WALLACE MICRO MART, PA-55, PH-19  
WARNER COMPUTER SYSTEMS, INC., GR-30  
WEBSTER MCEVOY & ASSOCIATES, SI-3  
WEST COAST CONSULTANTS, BUS-61, M-5, GR-9  
WEST SIDE ELECTRONICS, BUS-93  
WESTERN MICRODATA ENTERPRISES, PA-56  
WESTWARE SOFTWARE, INC., BUS-3, BUS-7, BUS-40, BUS-57, BUS-61,  
BUS-65, BUS-102, PH-15  
WHITNEY EDUCATIONAL SERVICES, ED-23  
WILSON JONES, BUS-1, BUS-5, BUS-90, BUS-91, BUS-17, BUS-50  
WISE OWL WORKSHOP, ED-58, ED-60, PH-21  
WYMAN ASSOCIATES, BUS-85, BUS-24, BUS-60  
XCOMP, APIII-21  
YUCAIPA SOFTWARE, PA-82  
ZEITGEIST, ED-106, ED-121  
ZEUS COMPUTING, PA-73

## GLOSSARY

This glossary compiled by Advanced Software Technology Inc. is provided to assist you in interpretation and meaning of certain terms commonly used in the micro computer industry. These will assist you in talking to computer dealers, other computer users and when reading computer manufacturers literature.

ACCESS TIME	The time required to retrieve a word from memory.
ACCUMULATOR	The register in a computer into which the results of an Arithmetic Logic Unit operation are placed. There may be more than one accumulator in a central processor.
ACOUSTIC COUPLER	A device for coupling a computer with a telephone for the transmission of data.
ADD TIME	Usually, the time, expressed in microseconds or nanoseconds, to add two one digit numbers.
ADD-ON	Circuit or system that can be attached to a computer to increase memory or performance.
ADDRESS	The numbered location of one byte of data in a computer's internal memory.
ALGORITHM	Step-by-step specification of the solution to a problem. A problem is conceived, an algorithm is devised for its solution. The algorithm is then represented by a flow chart. The flow chart is finally translated into a program.
ALGOL	Algorithmic Language; a type of computer programming language.
ALPHANUMERIC	The data set of all alphabetic and numeric characters.
ANALOG SIGNAL	A continuous electrical signal representing a condition (such as temperature or the position of game control paddles).
ANALOG COMPUTER	A computer that calculates by constructing an analogy and measuring answers in the form of voltages or distances, rather than calculating the answers in a precise mathematical fashion.
AND	A logical operation defined by the rules: if A AND B are 1, then C is 1, otherwise C is 0.
ANSI	American National Standards Institute.
APL	A high-level programming language.
APPLICATION	The procedure or problem to which a computer is applied. Common applications include payroll, general ledger, material requirements planning and inventory control.
APPLICATIONS SOFTWARE	Computer programs written to perform actual tasks such as inventory, mail list, accounts payable/receivable.



<b>ARITHMETIC LOGIC UNIT</b>	The element in a computer that can perform the basic data manipulations in the central
<b>ARRAY COMPUTER</b>	A computer in which the microprocessors are wired together into an "array" of so many rows and columns. The array computer is extremely fast. It can process several commands at the same time; and it can begin processing new information at the same time that it is processing old information.
<b>ARTIFICIAL INTELLIGENCE</b>	The ability of a machine (such as a robot or a computer) to imitate certain human actions or skills such as problem solving, decision making, perception and learning.
<b>ASCII</b>	American Standard Code for Information Interchange. A character code used for representing information.
<b>ASSEMBLER</b>	Program that takes the mnemonic form of the assembly language and converts it into binary object code for execution.
<b>ASSEMBLY LANGUAGE</b>	Allows programmers to use abbreviated wordcommands (mnemonics) in place of the long, confusing strings of ones and zeros that form a computer's machine language.
<b>ASYNCHRONOUS</b>	Referring to an event or device not synchronized with the timing circuit of a computer's central processing unit.
<b>AUDIO DEVICE</b>	Any computer device that accepts sound or produces sound. Examples include voice recognition and music or speech synthesis devices.
<b>AUXILIARY STORAGE</b>	A storage device in addition to the "core" or main storage of the computer. Auxiliary storage is the permanent storage for information. It includes magnetic tapes, cassette tapes, cartridge tapes, hard disks, floppy disks. Auxiliary storage can't be accessed as fast as main storage.
<b>AUDIT TRAIL</b>	The log of transactions generated by a data processing unit for purposes of security and error location.
<b>BASIC</b>	Beginner's All-Purpose Symbolic Instruction Code; a type of computer programming language.
<b>BATCH</b>	A processing mode where a program is submitted to the computer, and the result is delivered back. No interactive communication between program and user is possible.
<b>BAR</b>	The darker element of a bar code.
<b>BAR CODE</b>	An array of rectangular marks and spaces in a predetermined pattern.

<b>BAR CODE SYMBOL</b>	A graphic (printed or photographically reproduced) bar code composed of parallel bars and spaces of various widths. A bar code symbol contains a leading quiet zone, a start character, one or more data characters including in some cases a check character, a stop character, and a trailing quiet zone.
<b>BAUD</b>	Bits Per Second. Actually binary units of information per second. Teletypes transmit at 110 baud. Each character is 11 bits, and the teletype transmits at 10 characters per second.
<b>BACK UP</b>	Duplicate data files, redundant equipment or procedures used in the event of failure of a component or storage media.
<b>BATCH PROCESSING</b>	An approach to computer processing where groups of like transactions are accumulated (batched) to be processed at the same time.
<b>BI-DIRECTIONAL</b>	The type of printer in which characters are printed as the head moves from left to right and from right to left.
<b>BINARY NUMBER</b>	Representation of a number in the binary system, using a series of zeros and ones.
<b>BINARY SYSTEM</b>	A two-digit system (0 and 1) in which each element unit can take an "on" or "off" value.
<b>BIONIC</b>	Any combination of machine and living organ part, joined to accomplish a special task.
<b>BIT</b>	The contraction of Binary Digit. A bit always has the value zero or one. Bits are universally used in electronic systems to encode information, orders (instructions) and data. Bits are usually grouped in nybbles (four), bytes (eight) or larger units.
<b>BOOTSTRAP</b>	A program used for starting the computer, usually by clearing the memory, setting up devices and loading the operating system from input/output internal or external memory.
<b>BOOLEAN DATA</b>	A data type with only two possible values- true or false-represented by 0 or 1.
<b>BUBBLE MEMORY</b>	A type of memory device utilizing microscopic magnetic domains in an aluminum garnet substrate.
<b>BUG</b>	A mistake in a program or in an electrical circuit. Getting rid of the mistakes is known as debugging.
<b>BUS</b>	A path for electrical signals having a common function. Normally, a wire or cable.
<b>BYTE</b>	A set of eight bits. A byte is universally used to represent a character. Microcomputer instructions require one, two or three bytes. One byte includes two nybbles.

<b>CAD</b>	Computer Assisted Design.
<b>CAI</b>	Computer Assisted Instruction
<b>CAM</b>	Computer Assisted Manufacture.
<b>CAPACITOR</b>	A storage device, or circuit, that stores an electrical charge. Capacitors are often used inside RAM (Random Access Memory). A stored charge in a capacitor represents a "one" bit of information. An absence of a charge in a capacitor represents a "zero" bit of information.
<b>CARTRIDGE</b>	A circuit board (or card) inside a plastic case with a "plug". On the board are one or more ROM (Read Only Memory) chips containing programs and information.
<b>CASSETTE</b>	A small plastic cartridge that contains two spools of 1/8" magnetic tape, and which has recently been applied to mass storage requirements of microcomputers and minicomputers. A "digital" cassette is one certified or digital recording, which differs from the audio recording requirements.
<b>CBASIC</b>	Commercial Basic. CBASIC is a compiled language that has more flexibility than BASIC.
<b>CCD</b>	Charge Coupled Device. A storage device for information that uses nothing but special capacitors.
<b>CHARACTER</b>	Any letter, number, symbol or punctuation mark that can be transmitted as output by the computer.
<b>CHARACTER PRINTER</b>	A printer that transfers a fully formed letter, Number or symbol with each impression stroke. The characters are generally more legible than those created by a dot matrix printer.
<b>CHIP</b>	A rectangular wafer containing etched electrical circuitry.
<b>CIRCUIT BOARD</b>	A thin, rectangular plastic board on which are mounted one or more chips. There are many types of circuit boards (also called PC Boards and Cards) including memory boards, processor boards, I/O (Input/Output) boards, etc.
<b>COBOL</b>	Common Business Oriented Language. A high-level computer language using commands that resemble English. Cobol was designed specifically for business use.
<b>CODING</b>	The entering of a program or data into a computer, usually by means of a keyboard.
<b>COMMAND</b>	An order to the computer in the form of words and numbers typed on a keyboard, words spoken into a microphone, positions of a game or joystick, etc.
<b>COMPILE</b>	To translate high-level language into a set of

binary instructions.

COMPILED PROGRAM	Usually, a machine-code program produced by the action of a compiler and directly executable by the computer.
COMPILER	System software that produces a machine-code version of a program originally written in a high level language such as Cobol, Pl/1, etc.
COMPUTER	A general purpose electrical system designed for the manipulation of information and incorporating a central processing unit (CPU), memory, input/output (I/O) facilities, power supply and cabinet.
COMPUTER	The available resources of a computer, measured by speed, memory size, and capacity for information processing.
COMPUTER TIME SHARING	Permits one computer to serve several terminals in remote locations simulataneously and allows the cost of the computer to be divided among the users.
CONDUCTIVITY	The quality of a material that allows an electrical charge to pass through it.
CONFIGURATION	A term used by computer people in referring to the equipment that will be assembled to work as a unit for a business. It includes the options chosen as well as peripheral devices.
CONTROL UNIT	Module in charge of the computer operations.
CONTROLLER	A piece of hardware that usually monitors the use of input and output equipment.
CONSOLE	A CRT or teletypewriter used to control and monitor computer operations.
CP/M	Control Program/Monitor. One of the more common computer operating systems on which many computers are based and much software written.
CPU	Central Processing Unit. The computer module in charge of fetching, decoding and executing instructions.
CRASH	A situation in which the computer becomes misdirected or blocked, due to a hardware or software malfunction. A head-crash in a disk system refers to the accidental impact of the read/write (R/W) head on the disk surface.
CORE	A particular type of main computer memory. Another kind is MOS.
CRT	Cathode Ray Tube. The television tube used to display pictures or characters. Also the computer terminal made from a CRT. See VDT.
CUSTOM SOFTWARE	Computer programs prepared for a specific purpose. Opposed to package software, in which



programs are written in advance, usually for general purposes.

CURRENT	The flow of electricity- the movement of electrons through a wire.
CANNED SOFTWARE	Ready to run programs written in advance for general application uses.
DAISYWHEEL	A style of printer or typewriter printing element in the shape of a disk. Each character is located at the end of a "petal" connected at the center of the disk, hence the name.
DATA	Information stored or processed by the computer.
DATA SECURITY	Protection of computerized information by various means, including cryptography, locks, identification cards and badges, restricted access to the computer, passwords, physical and electronic backup copies of the data, and so on.
DASD	Direct Access Storage Device. Examples are: floppy disk, cartridge disk and disk drives.
DATA BUS	The channel via which components of a computer system exchange information.
DATABASE	Systematic organization of data files for easy access, retrieval and update.
DATA SET	Refers to one of two things. Modems are often referred to as data sets. Files are also referred to as data sets.
DBMS	Data Base Management System.
DEBUG	The process of removing errors (bugs) from programs.
DEGRADATION	Slow down in the response of a computer system in the operator's eyes. This phenomenon is seen when the number of terminals trying to use the system increases beyond the ability of the CPU to respond.
DEDICATED	If a computer or a piece of hardware is assigned exclusively to one task, it is said to be a dedicated system.
DEDICATED LINKAGE	A communication line (link between a terminal and a computer) that is dedicated to a single terminal as opposed to a dial-up line.
DEVELOPMENT	Program Writing.
DIAGNOSTIC	A program or routine used to diagnose system malfunctions.
DIGITAL TO ANALOG	Device that transforms a computer's digital electrical pulses to continuous analog pulses in order to relay information to or power some device outside of the computer.

DIGITAL COMPUTER	A computer that uses on/off sequences of electronic impulses to calculate results.
DIGITIZER	Device used to convert analog information into its digital equivalent.
DIAL-UP LINE	A line that is given to the first terminal that dials in to the computer as opposed to a dedicated line.
DIODE	Device that enables the current flow in only one direction.
DIP	Dual In-line Package. A standard Integrated Circuit (IC) package with two rows of pins at one-tenth of an inch intervals.
DISABLE	To render a control or process temporarily inoperable, while another process takes place.
DISK	A flat, circular object that resembles a phonograph record. A record "stores" music; a disk stores information. The disk is inserted into a disk drive that rotates at high speed. The drive writes new information onto the disk and reads information that is already stored on the disk. There are two major types of disks found on small computers, flexible floppy disks and hard disks.
DISTRIBUTED PROCESSING	Use of computers at various locations each of which is tied to a central computer. This allows preliminary processing to be handled by the "distributed" computers and eases the load on the central computer.
DISK DRIVE	The machinery that contains, rotates, writes onto and reads from a disk.
DISKETTE	Floppy disk. A circular mylar substrate coated with a magnetic oxide, rotating inside a special jacket that internally cleans the surface.
DISPLAY SCREEN	Same as CRT.
DOCUMENTATION	The written support material for a computer or a program (user or operator instructions).
DOT MATRIX	The type of printer in which characters are formed from multiple dots, much as a TV picture is created.
DOWN	Out of service due to power failure, software or hardware breakdown.
DOWN TIME	That period during which a system is inoperable through power failure or hardware breakdown.
DRIVE	The electromechanical device that rotates the data storage disk while the magnetic sensor transfers data to and from the disk.

<b>DUAL DENSITY</b>	A reference to storage disks and disk drives that are capable of storing and reading twice the number of information tracks (80) per disk as the early standard (35-40).
<b>DUMB TERMINAL</b>	A computer terminal, normally providing keyboard and video monitor, which requires connection to a main computer, but which allows remote data entry and access.
<b>DP</b>	Data Processing. Use of a computer to process data.
<b>DUMP</b>	The operation of preserving the contents of one memory into another.
<b>EAM</b>	Electric Accounting Machines. The general classification for nearly obsolete card handling equipment, also known as "unit record" or tabulating equipment.
<b>ENVIRONMENT</b>	The state of all registers, memory locations and other operative conditions in a system.
<b>ERROR MESSAGE</b>	A one-sentence statement by the computer to the operator that something has been done incorrectly, e.g., "Does not compute."
<b>EXPANSION INTERFACE</b>	A device to expand the functional capacity of a computer by containing additional memory or controlling more peripherals.
<b>EXTERNAL MEMORY</b>	Used to store programs and information that would otherwise be lost if the computer was turned off. Cassette tapes, disks, bubble memory and CCD (charge coupled devices) are also known as mass memory and removable memory.
<b>EXECUTE</b>	Act of running a computer program.
<b>FIELD</b>	In a data file, the number of character spaces reserved for a specific item of information (e.g., in an employee record the 10 to 12 spaces required for the Social Security number).
<b>FILE</b>	A logical block of information, designated by name, and considered as a unit by a user. A file may be physically divided into smaller records.
<b>FILE MAINTENANCE</b>	Updating the file to reflect changes in information. Data might be added, altered or deleted. File maintenance also refers to reorganizing files, deleting records in mass that are no longer in use, etc.
<b>FIRMWARE</b>	A program permanently fixed onto a memory chip (ROM), i.e. software on a hardware support.
<b>FIXED DISK</b>	A device in which the disk pack is sealed and cannot be removed. Being sealed it cannot be exposed to dust and dirt and therefore can be operated at higher speeds than removable units with greater reliability.

<b>FLEXIBLE DISK</b>	Floppy Disk. (Diskette)
<b>FLOPPY DISK</b>	Recent mass-storage device using a soft (floppy) disk to record information. The disk rotates in a cardboard jacket. Cutout holes provide access for the moving head (which must be applied against the disk in order to read or write) and for index information.
<b>FLAGS</b>	Special registers that record particular details of a number, such as whether it is zero or not.
<b>FLOW CHART</b>	Symbolic representation of a program sequence. Boxes represent orders or computations. Diamonds represent tests and decisions (branches). A flow chart is the recommended step between algorithm specification and program writing. It greatly facilitates understanding and debugging by breaking down the program into logical, sequential modules.
<b>FORTH</b>	An interpreter language developed by FORTH, Inc. Forth programs, in general, are smaller and run faster than the same programs written in Basic. Forth programs are especially suited to controlling devices that can be hooked into the computer, such as household appliances, "snooper" sensors and robots.
<b>FORMAT</b>	A form into which the value of a variable is meant to fit.
<b>FORTRAN</b>	FORMula TRANslator. Early high-level language devised for numerical computations. Although complex, it is most frequently one of the programming languages used in scientific environments. Requires a compiler (by contrast, Basic, derived from Fortran, can be interpreted).
<b>GAME</b>	A free-standing control for computer input usually PADDLE used for the manipulation of players in a game application.
<b>GRAPHICS</b>	Pictures as opposed to text.
<b>GRID</b>	A method of dividing the computer screen into evenly spaced horizontal and vertical lines. Used for locating points on the screen. These points are expressed as row and column coordinates.
<b>GIGO</b>	Acronym for the computer programmer's saw "Garbage in, garbage out".
<b>HALF ADDER</b>	The basic computational device, or circuit, within a computer that carries out the operation of addition on binary-coded numbers.
<b>HARD COPY</b>	Computer output on paper.
<b>HARD DISK</b>	A data storage medium encompassing a permanently mounted disk and drive with a storage capacity 10 to 30 times that of the removable floppy disk.



<b>HARDWARE</b>	The bolts, nuts, boards, chips, wires, transformers, etc. in a computer. The physically existing components of a system.
<b>HARD-WIRED</b>	A reference to a computer component that functions as a result of being wired (soldered) into the system rather than by means of a program.
<b>HASHING</b>	A system for verifying data input.
<b>HEURISTIC METHODS</b>	Methods that serve to guide or reveal answers but that cannot be proved.
<b>HEX</b>	Short for hexadecimal. A numbering system based on 16 rather than 10. Most computers operate using hexadecimal numbers.
<b>HOLOGRAPHY</b>	A technique that, with the use of laser photography, captures a three-dimensional image (hologram) of the photographed subject. Viewers who see the hologram from different angles can also see the subject's image from different angles.
<b>HIGH LEVEL LANGUAGE</b>	A computer programming language that approaches English in its syntax. Usually easier to learn than a low level language such as assembly language. BASIC, COBOL and RPG are examples of high level languages.
<b>I/O</b>	Input/Output. The communication of information to and from a computer or peripheral device.
<b>IC</b>	Integrated Circuit.
<b>INPUT</b>	Any information coming into the computer.
<b>INPUT DEVICE</b>	Any machine that allows you to enter commands or information into the computer's main (RAM) memory. An input device could be a typewriter keyboard, an organ keyboard, a tape drive, a disk drive, a microphone, a light pen, a digitizer or electronic sensors.
<b>INTEGRATED CIRCUIT CHIP</b>	A small (about 1 cm square) piece of semiconductor material, often silicon, on which computer elements- processors and memory- are stored; often called the "IC chip" or simply "chip".
<b>INTERFACE</b>	The hardware or software required to interconnect a device to a system. One-chip interfaces now exist for most peripherals.
<b>INTERPRETER</b>	A translation program used to execute statements expressed in a high-level language. An interpreter translates each such statement into a sequence of binary instructions and executes it immediately. Instructions can be freely added or modified in the user program, and execution may be resumed without delay: an interpreter is interactive.

INTELLIGENT TERMINAL	An input and output device that has freestanding processing capabilities.
INTERACTIVE COMPUTER PROGRAM	A program that allows for the exchange of messages between the user and the computer.
ISAM	Indexed Sequential Access Method. A method for organizing data files for rapid access.
JOYSTICK	An input device consisting of a normally vertical stick that can be tilted in any direction to indicate direction of movement.
KEYPAD	A keyboard that is totally numeric (zero through nine) and resembles a calculator.
KEYBOARD	A group of pushbuttons used for entering information into a computer system.
KEYSTROKE	A keystroke is each time a key on a keyboard is depressed. A count or estimate of keystrokes is often used to determine how long a function will take or to price data entry services.
KILO	Prefix meaning "1000".
KILOBYTE	Term meaning "1000 bytes" (precisely, 1024 bytes).
LANGUAGE	In relation to computers, any unified, related set of commands or instructions that the computer can accept. Low-level languages are difficult to use but closely resemble the fundamental operations of the computer. High-level languages resemble English.
LATTICE	A regular crisscrossing, arraylike arrangement of atoms in a crystalline substance such as silicon.
LEASED LINE	Usually synonymous with dedicated line.
LCD	Liquid Crystal Display.
LED	Light Emitting Diode.
LIGHT PEN	An input device for a CRT. It records the emission of light at the point of contact with the screen. The timing relationship to the beginning of a scan determines the approximate position on the screen.
LETTER QUALITY PRINTER	One which forms whole characters and provides output much like a standard office typewriter in quality.
LINE PRINTER	A device that prints information from the computer at a high speed; produces hard copy.
LISP	List-Oriented Interactive Language. A high-level programming language.
LOAD	The action of transferring data in a register or memory location, or a program into a memory area.

<b>LOCATION</b>	The physical place in the computer's memory, reached by an address, where an item of information is stored.
<b>LOGIC</b>	The term used to designate that part of the computer's circuitry that makes logical decisions (e.g., x is greater than, less than or equal to y).
<b>LOGICAL DECISION</b>	The capability of the computer to decide if one quantity is greater than, equal to or less than another quantity and then use the outcome of that decision as a cue to proceed in a given way with a program.
<b>LOGICAL OPERATOR</b>	The symbols used in programming to represent operations of logic.
<b>LOGO</b>	A computer language, developed by scientists at MIT's Artificial Intelligence Laboratory, that has been used experimentally over the last several years in a children's learning laboratory as a tool to help youngsters master concepts in mathematics, art and science.
<b>LOOP</b>	A group of instructions that may be executed more than once.
<b>LSI</b>	Large Scale Integration.
<b>M</b>	The symbol representing one million.
<b>MACHINE LANGUAGE</b>	Set of binary codes, representing the instructions that can be directly executed by a processor.
<b>MAGNETIC BUBBLE</b>	A memory device placed on a chip. The bubbles are microscopically small, magnetized "domains" that can be moved across a thin amgnetic film by a magnetic field. Magnetic-bubble chips that store a million bits of information have been fabricated. Magnetic bubble memory is not as fast as RAM or ROM but many times faster than mass memory devices such as tapes and disks. Yet like tapes and disks, the information stored inside the magnetized bubbles is retained even after the computer's power is switched off.
<b>MAIN MEMORY</b>	The internal memory of the computer contained in its circuitry, as opposed to peripheral memory (tapes, disks).
<b>MAINFRAME</b>	The box that houses the computer's main memory and logic components- its CPU, RAM,ROM, interface input/output (I/O) circuitry and so on. The word is also used to distinguish the very large computer rom the minicomputer or microcomputer.
<b>MAINTENANCE</b>	The adjustment of an existing program to allow acceptance of new tasks or conditions (e.g., a new category of payroll deduction).
<b>MATRIX PRINTER</b>	A matrix printer prints using a grid of dots

usually 5 by 7. Characters are formed by striking certain dots in the grid.

<b>MASK</b>	A pattern, usually "printed" on glass, used to define areas of the chip on the wafer for production purposes.
<b>MASS MEMORY</b>	See: External Memory.
<b>MASTER FILE</b>	A file that contains the main, permanent information used in a system. Other files are transaction files or files used as temporary work areas.
<b>MEGA (MB)</b>	Prefix for million. Hence one megabyte equals a million bytes.
<b>MEGAHERTZ</b>	For a microprocessor, how many millions of times per second its internal clock ticks, permitting another step in one of its basic operations.
<b>MEMORY</b>	Storage for the binary data and programs.
<b>MENU</b>	A list of programs or applications that are available by making a selection. For example, a small home computer might display the following menu: "Do you want to" 1. Balance checkbook? 2. See appointments for May? 3. See a recipe? Type number desired.
<b>MERGE</b>	A computerized process whereby two or more files are brought together by a common attribute, as ZIP codes in ascending numerical order are used to merge a computer file with, for example, a file of Aged Accounts Receivable.
<b>MICRO</b>	The prefix indicating 1/.1,000,000th.
<b>MICROCOMPUTER</b>	A small but complete computer system, including CPU, memory, input/output (I/O) interfaces and power supply.
<b>MICROPROCESSOR</b>	LSI implementation of a complete processor (ALU + control unit) on a single chip.
<b>MICROPROCESSOR UNIT</b>	See: CPU
<b>MILLI</b>	Prefix indicating 1/1000th.
<b>MILLISECOND</b>	1/1000th of a second.
<b>MINICOMPUTER</b>	A small computer, intermediate in size between a microcomputer and a large computer.
<b>MINI-FLOPPY</b>	A 5 1/4" diskette.
<b>MODEL</b>	A computer reproduction (for simulation) of a real or imaginary person, process, place or thing. Models can be simple or complex, artistic, educational or entertaining, serious or part of a game.
<b>MODEM</b>	Modulator-demodulator. A device that transforms



a computer's electrical pulses into audible tones for transmission over a phone line to another computer. A modem also receives incoming tones and transforms them into electrical signals that can be processed and stored by the computer.

MOS	There are currently two kinds of computer memory in use, core and MOS. MOS stands for metal oxide semiconductor. MOS is found in hand calculators. It is cleared when power is turned off. Core retains data even after power is turned off.
MULTIPLEXER	A connecting device that interfaces two or more external devices, such as terminals and printers, with the computer.
MTBF	Mean time between failures. A way of gauging the general reliability of a piece of gear.
MULTI-PROCESSING	A small computer that has more than one CPU and is therefore able to process several instructions simultaneously; another form of parallel processing.
MULTI-PROGRAMMING	A computer operating system that can handle two or more computer programs at the same time. Actually no two programs are executed at the same time. Their execution is interleaved. Because the computer is so fast, it appears to the user as though more than one program is executing.
NANO	The prefix meaning one billionth.
NANOSECOND	A billionth of a second. Most computers have a cycle time, or "heartbeat", of hundreds of nanoseconds. Most high-speed computers have a cycle time of around 50 nanoseconds.
NATURAL LANGUAGE	A spoken, human language such as English, Spanish, Arabic or Chinese. In the future, small computers will probably be fast enough and have large enough vocabularies to enable you to talk to them using your natural language. Yet there will still be a need for special computer languages that are more efficient than natural languages for handling certain kinds of tasks.
NETWORK	A group of small computers communicating over telephone lines or by use of radio or microwaves.
NOISY SIGNALS	Computer-measured signals that are corrupted by electronic interference, patient movements, and coughing.
NUMBER CRUNCHER	A computer that is able to calculate at a very high rate of speed and store vast amounts of data.
NYBBLE	Usually four bits, or half a byte.
OBJECT PROGRAM	A program in machine-readable form. A compiler translates a source program into an object program.

OCR	Optical Character Recognition. The data input system that allows the computer to "read" printed information.
OEM	Original Equipment Manufacturer. A term commonly used to refer to a computer sales organization that has an arrangement to sell a manufacturers product. In other industries they would be referred to as dealers or distributors.
OFF LINE	Equipment or information that is not currently part of an operating computer system.
ON LINE	Directly connected to the computer system and in performance-ready condition.
OPERATING SYSTEM	Software required to manage the hardware and logical resources of a system, including scheduling and file (OS) management.
OPTICAL WAND	An input device with a photoelectric "camera" that senses black and white light patterns.
OR	A logical operation in a computer program in which a decision is made if any one of two or more conditions are met.
OUTPUT	Any processed information coming out of a computer, via any medium: print, CRT, etc.
OUTPUT DEVICE	A machine that transfers programs or information from the computer to some other medium. Examples of output devices include tape, disk drives and bubble memory; computer printers, typewriters and plotters; the computer picture screen (video monitor); robots, and sound synthesis devices that enable the computer to talk and play music.
PACKAGED PROGRAM	A program designed for a specific application of broad, general usage, unadapted to any particular installation.
PACKET NETWORK	An electronic message carrying system that allows computers and terminals in different locations one-way and two-way communication with each other. Packet networks differ from other communications networks in that they insure that the data being transferred arrive intact (ungarbled) and allow different kinds of computers to communicate with one another.
PERMANENT STORAGE	Storage of computer data on a disk or magnetic tape.
PASSWORD	A code word or group of characters a computer system might require to allow that operator to perform certain functions. An operator's password might allow him to update payroll hours, but not run checks.
PASCAL	A high-level programming language.
PCB	Printed Circuit Board.

<b>PERIPHERAL</b>	A human interface device connected to a computer.
<b>PICOSECOND</b>	A trillionth of a second. Even light, the fastest substance in the universe, can only travel one-hundredth of an inch in a trillionth of a second.
<b>PIGGYBACK SIGNAL</b>	A secondary signal in the form of electricity, radio waves and so on, carrying information that is transmitted along with or during a pause in the primary signal.
<b>PILOT</b>	An interpreter language, like Basic and Forth. Pilot is a simple programming language that is ideally suited for use in computer-aided instruction applications.
<b>PIPELINE COMPUTER</b>	A computer with a string of "processor" CPUs all capable of executing an operation simultaneously.
<b>PIXEL</b>	(from picture element) The computer picture screen is divided into rows and columns of tiny dots, squares or cells. Each of these is a pixel.
<b>PLASMA-RAY DEVICE</b>	A flat computer picture screen based on a grid of metallic conductors separated by a thin layer of gas. When a signal is generated at any intersection along the grid, the gas discharges and causes the transparent screen to glow at this point. In the future, the thinner, more reliable, plasma ray and solid-state devices will replace CRTs as computer video display terminals.
<b>PL/1</b>	Programming Language Number 1; type of computer programming language.
<b>PLATTER</b>	A hard disk used for computer mass memory.
<b>PLOTTER</b>	A mechanical device for drawing lines under computer control.
<b>POS</b>	Point of Sale. Capturing data at the time of the original transaction rather than at some later time. Most common uses are in the retail environment.
<b>PORTABILITY</b>	The property of software that permits its use in a variety of computer environments.
<b>PRINTOUT</b>	Printed information (hard copy) produced by a computer's printer.
<b>PROGRAM</b>	A sequence of instructions that result in the execution of an algorithm. Programs are essentially written at three levels: (1) binary (can be directly executed by the MPU), (2) assembly language (symbolic representation of the binary), (3) high-level language (such as Basic), requiring a compiler or interpreter.
<b>PROGRAMMING LANGUAGE</b>	A set of rules and conventions used to prepare the source program for translation by the computer.

ter. Each language has its own rules. Examples of programming languages are BASIC, COBOL and RPG.

RAM	Random Access Memory. The portion of computer memory generally available to execute programs and store data. Memory locations can both be read from and written to at high speeds.
RANDOM ACCESS	An access method where each word can be retrieved directly by its address.
READ	To read is to accept data, from a disk, card, etc. for storage and/or processing.
REAL-TIME SYSTEM	A computer system that responds immediately at the time a transaction or event occurs.
RECORD	The process of writing information, or the block of information itself.
REGISTER	One word memory, usually implemented in fast flip-flops, directly accessible to a processor. Most MPUs include a set of integral registers that can be accessed much faster than the main memory.
RETRIEVAL	The reading of data from a permanent storage device and its transfer into memory.
RECOVERY	Procedure used to get back on track if you encounter a hardware problem or program problem. Backup is used in the recovery process.
RESISTANCE	The opposition provided by a wire or circuit element to the passage of a steady electric current.
REPORT GENERATOR	A computer program designed to be used with very little training. They are designed to allow the user to retrieve information from files in various report formats.
RESISTOR	A circuit element used to provide resistance for protection, operation or control of an electric current.
RESOLUTION	The quality of the image on the CRT, as influenced by the number of pixels on the screen. The greater the number of pixels, the higher the resolution.
ROBOT	Any stored-program device capable of altering its external environment.
ROM	Read Only Memory. A portion of computer memory where information is permanently stored. This information can be read at high speed but can never be altered. It is not available to execute programs or to store data.
ROSETTA	An early scaled-down version of the Smalltalk language implemented on eight-bit small computers by scientists of Rosetta Inc., of Houston, Texas.



<b>RPG</b>	Report Program Generator. A programming language used on some small business computers. It is usually considered a high level language.
<b>RUN</b>	Execute a program.
<b>SEMICONDUCTOR</b>	A substance midway between an electrical "conductor" and an electrical "insulator." All types of "circuit elements" can be made from a silicon semiconductor, including resistors, insulators, capacitors, diodes and transistors.
<b>SENSOR</b>	Any device that acts as "eyes" or "ears" for a small computer. Types of sensors include photo-electric sensors that are sensitive to light; image sensor cameras that record visual images and transform the images into digital signals; pressure sensors that are sensitive to any kind of pressure; contact sensors that record infrared information, and ultrasonic transducers that produce a high-frequency sound wave that bounces off objects and lets the computer calculate the distance between itself and those objects.
<b>SCREEN</b>	Same as CRT.
<b>SOURCE PROGRAM</b>	A program in assembly language, which gets translated to an "object program" of numeric instructions the processor understands.
<b>SEQUENTIAL ACCESS</b>	The method in which data is accessed by scanning sequential blocks or records.
<b>SEQUENTIAL FILE</b>	Normally, a data file in which items are placed one directly after another, as records are kept in a file cabinet. Sequential files are characterized by slower access than are random access files.
<b>SERVICE BUREAU</b>	A company that provides programming and other services to businesses.
<b>SILICON</b>	After oxygen, the most abundant element on earth. Most computer chips are made from silicon.
<b>SMALLTALK</b>	A computer language being developed by the Learning Research Group at the Xerox Palo Alto Research Center. When it finally becomes commercially available, Smalltalk may well be the most powerful language for small computers of the future.
<b>SIGN-OFF</b>	The disconnect procedure that severs interactions between a user and a computer.
<b>SIGN-ON</b>	The connect procedure that establishes contact between a user and a computer.
<b>SOFT COPY</b>	Information contained magnetically in storage.
<b>SOFTWARE</b>	The programs (contrasted to hardware). Any set of coded instructions causing the computer to perform a task.

<b>SORT</b>	A full or part program to reorder data sequentially, usually in alphabetic or numeric order.
<b>STRING</b>	Characters organized into a particular sequence.
<b>SOURCE CODE PROGRAM</b>	A program written in a language that is not directly readable by a computer: it must be converted to an object program for use by a computer.
<b>SOURCE LANGUAGE</b>	The code a programmer produces in either a high or low level language before it is translated into object or machine language.
<b>STRINGY FLOPPY</b>	An endless loop of recording tape in a cartridge used as external memory.
<b>SUBROUTINE</b>	A program segment permitting a frequently required task to be called from any point of the main program. Execution is transferred to a subroutine when a subroutine call occurs. Subroutines save memory space at the expense of execution speed.
<b>SYSTEM</b>	A set of programs, a set of hardware or a set of programs and hardware that work together for some specific purpose.
<b>SUPER CONDUCTOR</b>	A material whose resistance to electrical current has been reduced to almost zero.
<b>SYNTHESIZER</b>	Any device that produces something that is based on digital signals stored in the computer. A voice synthesizer produces sounds that closely resemble a person talking. A music synthesizer makes music.
<b>TAPE</b>	Inexpensive mass storage medium. Must be accessed sequentially. Convenient for large files.
<b>TELEPRESENCE</b>	By using all of a robot's sensors, a person can be electronically aware of the robot's immediate environment and control the robot's actions just as if the person were actually in the location of the robot.
<b>TELE-COMMUNICATIONS</b>	Transmission of data over long distances using phone lines, microwave, etc.
<b>TELESCREEN</b>	A two-way, audiovisual "TV" used to monitor and control remote activities.
<b>TELETEXT</b>	Textual information transmitted to people's homes via their TV. Information is usually maintained and updated on a computer. A teletext system often allows two-way interaction by creating a viewer computer link over a telephone line.
<b>TELETYPEWRITER</b>	A computer typewriter. Used by many deaf people (without a computer connection) to make telephone calls. TTYs are quickly being replaced by devices such as the C-Phone (a small computer),

which are faster and much more versatile.

TERMINAL	Usually, a work station remote from the main computer allowing keyboard input and CRT and/or printer output.
THROUGHPUT	The number of instructions executed per second or other measure of execution efficiency, such as I/O processing.
TIME SHARING	Occurs when a single computer has multiple users who are each getting a "slice" of each second of the computer's processing time.
TRANSISTOR	A microelectronic circuit element made from a semiconductor such as silicon. Transistors inside a small computer form switches that turn electricity on and off, amplifiers that increase an electrical charge, and, ultimately, logic gates that enable the computer to perform arithmetic functions, make decisions, and juggle symbols such as letters and words.
TURING TEST	A test devised by the computer scientist, Alan Turing, to determine if a machine is "intelligent." Essentially, if a human observer cannot tell whether he or she is in the presence of a machine or a person, the machine is judged to be "intelligent."
TUBE	Same as CRT.
TURNKEY	Complete upon delivery. A turnkey system purchase provides the buyer a package of fully compatible hardware, software and peripheral equipment, thoroughly documented, installed, debugged and totally operational.
USER-FRIENDLY	Descriptive of both hardware and software that are designed to assist the user by being scaled to human dimensions, self-instructing, error proof, etc.
UTILITY	Software for routine tasks or for assisting of programmers.
VIDEODISK	A record-like device storing a large amount of audio and visual information that can be linked to a computer. A single side of one videodisk can store the pictures and sound for 54,000 separate TV screens. Yet any one of these screen images can be accessed and displayed.
VIDEO MONITOR	A computer picture screen.
VIDEO DISPLAY TERMINAL (VDT)	A computer picture screen and keyboard.
VLSI	Very Large Scale Integration. In practice, the compression of more than 10,000 transistors on a single chip.
WAFER	The slices of silicon on which a computer is fabricated.

**WORD** A logical unit of information. It may have any number of bits, but it is usually four, eight or 16 for microcomputers.

**WORD LENGTH** The number of bits that can be stored in a word; common word lengths are 8, 12, 16, 24, 32, 36, and 60 bits.

**WORD PROCESSOR** A text editor system for electronically writing, formatting and storing letters, reports and books prior to printing.

**WRITE** To transfer data from internal to external memory.



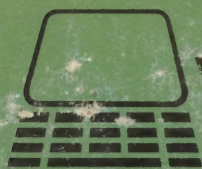
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## APPLE SOFTWARE DIRECTORY



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